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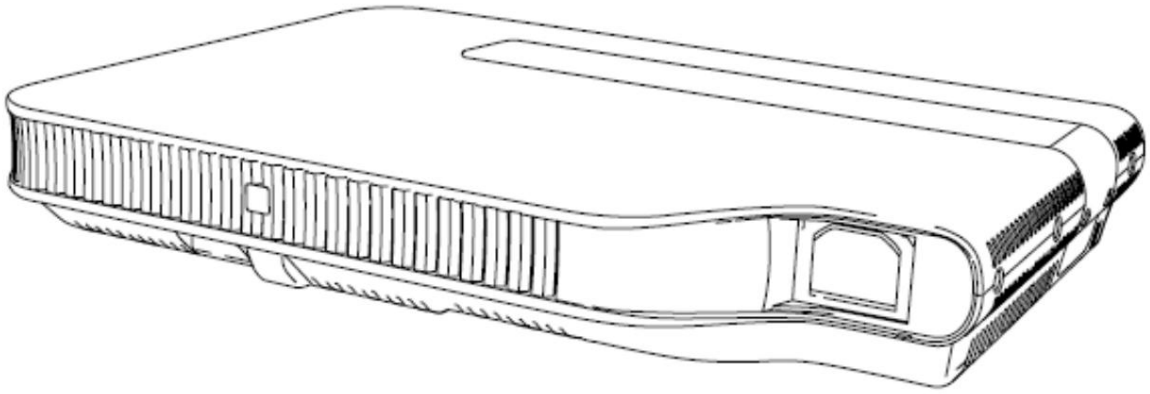
Service Manual

XJ-A240/A245



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This device uses a laser as a light source. When disassembling the device, observe the following precautions. • Before disassembling, turn off the power and unplug the AC power cord from the outlet. • If you want to perform a power-on test during repairs, check before starting

check, install the top cover.

• Never look into the laser light source (LSA) while the nutrition.

• Before removing the laser light source cover to replace it, turn off the power and unplug the AC power cord from the outlet.

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1. TECHNICAL SPECIFICATIONS

	2500 lumens per ANSI DLP
Brightness Projection	
system DLP chip	Size: 0.65" Pixels: WXGA (1280 x 800) 2X optical zoom, electric
Projection lens Light	focus Laser and RGB mini D-Sub LED 15 pins x 1
source Computer	(also used as
socket	component input) Input / audio output (stereo) and video input, 3.5 ÿ mini jack x 1 HDMI port TYPE A x 1 USB 2.0 TYPE A
AV	(XJ-A245 only) For RS-232C control, dedicated connector x 1
connector	Yes (XJ-A245 only)
HDMI port	(Connects to a dedicated port on
USB port Serial port	the YW-3 projector)
Wireless LAN adapter	
Environmental requirements Operating t	emperature: 5 to 35° C (41 to 95OF) Operating humidity: 20-80% (non-condensing) Operating altitude: 0-3000 m (0-10000 ft) above sea level AC 100-240V, 50/60Hz, 3.3A-1.4A
Power	297(W) x 210(D) x 43(H) mm (11.7" x 8.3" x 1.7")
Dimension	Approximately 2.3 kg (5.1 lb) English, French, German,
Weight	Italian, Spanish, Swedish, Chinese
Display Languages	(Simplified), Chinese (Traditional), Korean, Japanese

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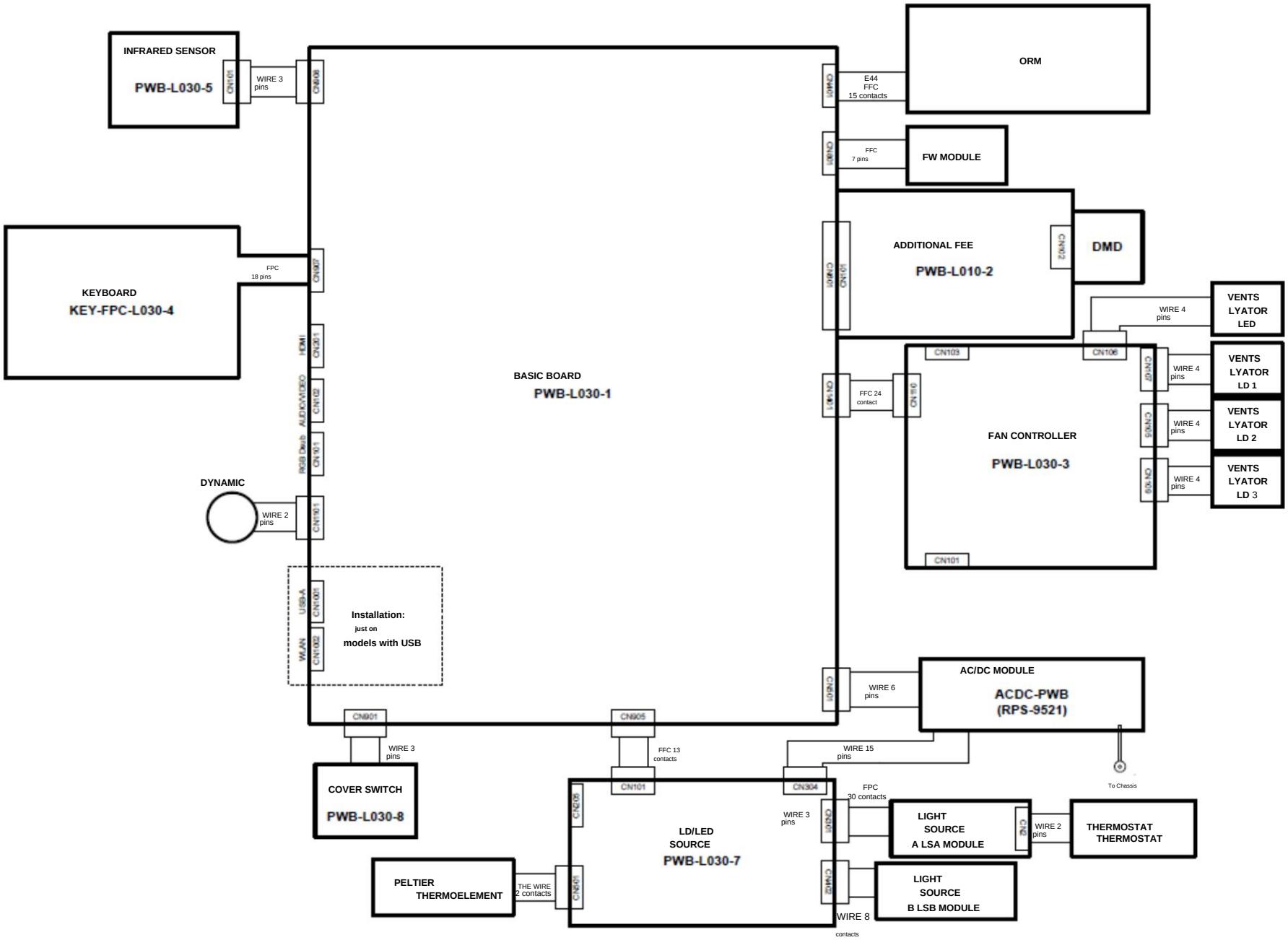
2. FLOW DIAGRAM



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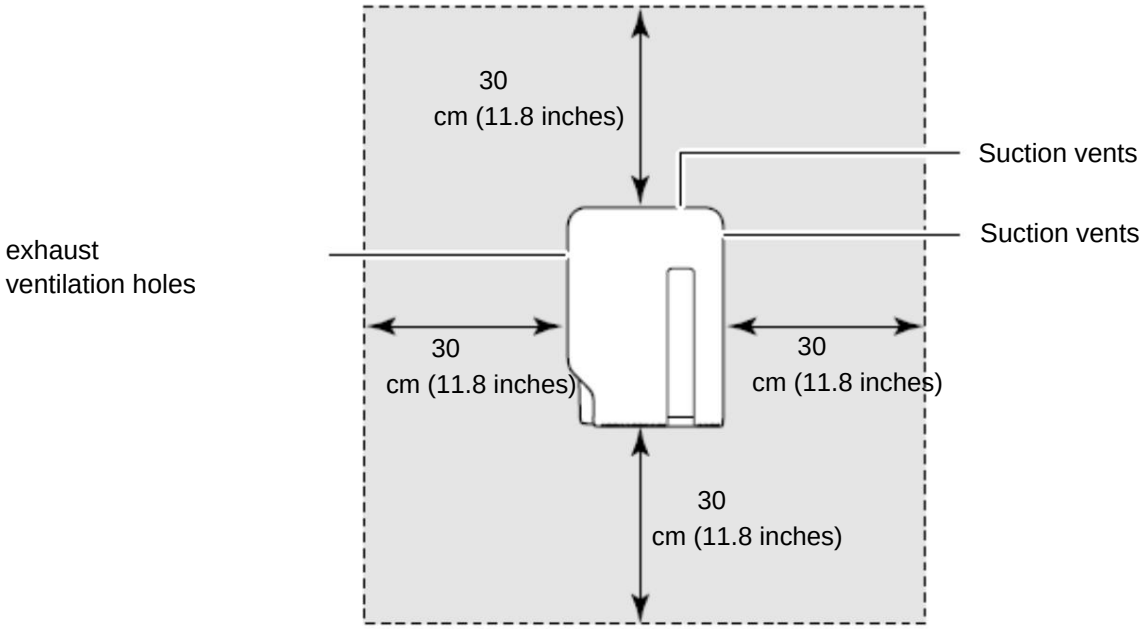
3. INSTRUCTIONS FOR USING THE PROJECTOR

3-1. Installation Precautions

Operating conditions have a great influence on the performance of the projector. Make sure the projector is used only under the conditions described below. • Use a conveniently
located power outlet that is easily accessible when needed.
turn off the projector.

• Do not place any objects in the area marked with a dotted line in the following figure. Do not place any objects within 30 cm (11.8 inches) of the intake and exhaust vents.



Leave sufficient distance and do not block the intake and exhaust vents.
• The fans become hot while the projector
is in use. Do not touch the ventilation holes with your hands. In addition, the area near the ventilation openings also heats up. Never place plastic or heat-sensitive materials near or under the projector. Such items may be deformed or discolored. • Do not place the projector on an unstable or vibrating surface. Never install

projector on a carpet, blanket, towel, or other soft material.

• Do not install the projector in a location exposed to direct sunlight. • Do not install the projector in
places with a lot of dust and moisture. • Install the projector away from speakers, TVs,
radios, and other devices that
generating magnetic fields, as well as away from heaters.

• Over time, dust and dirt may build up on the projector around the intake vents, which may cause the projector to fail. Before turning on the projector every time, make sure that there are no dust deposits on the suction vents. If you find dust around the suction vents, remove it with a cloth.

• When installing the projector, make sure that it is positioned in such a way that the suction vents are not blocked. Operation with blocked ventilation openings will shorten lamp life.

• The airflow from the air conditioner may blow heat out of the area around the projector lens, which may cause image ripples. In such a case, adjust the airflow from the air conditioner or move the projector.

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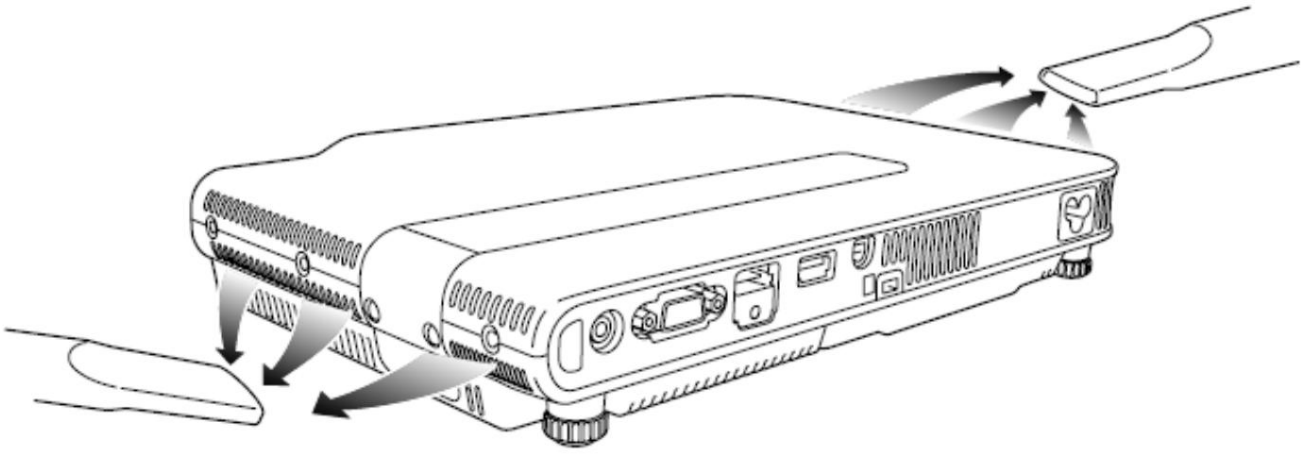
3-2. Cleaning the projector
Before cleaning the projector, make sure it has cooled down sufficiently.

3-2-1. Cleaning the outside of the projector Wipe the outside of the projector with a soft cloth dampened with a mild solution of water and a mild neutral detergent. Wring out the cloth before wiping. Do not use gasoline, alcohol, thinners or other volatile agents for cleaning.

3-2-2. Cleaning the lenses Gently wipe the lenses with standard lens tissue or optical glass cleaning paper, similar to those used for spectacles and camera lenses. When wiping the lenses, be careful not to scratch them.

3-2-3. **Cleaning the intake and exhaust vents** Dust and dirt accumulate around the intake vents located on the back and sides of the projector. Periodically remove accumulated dust and dirt with a vacuum cleaner as shown in the figure below.



IMPORTANT! • Continued use of the projector while dust accumulates around the intake vents may cause the internal components to overheat and result in failure. • Under certain operating conditions, dust and dirt may also accumulate around the exhaust vents located at the front. In this case, clean the exhaust vents as described above.

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4. PRECAUTIONS DURING REPAIR

This device uses a laser as a light source. When disassembling the device, observe the following precautions. • Before disassembling, turn off the power and unplug the AC power cord from the outlet. • If it is necessary to
perform a power-on test during repair, before starting the test,

install the top cover.
• Never look into the laser light source (LSA) while the power is on. • Before removing the cover of the laser light source to replace it, turn off the power and disconnect
AC power cable from the outlet.

4-1. Acceptance of products for repair

(1) Registering the necessary information before repair <At the time of receiving a repair order> • Model name • Order
date/past repair history (if
registered) • Product serial number ÿ see page 8 for details • Fault information provided
by the user • Unit run time/lamp run time information ÿ For details, refer to

page 9.
• Error code information ÿ see page 12 for details. Only error information (ERROR CODE) is used. Information about warning codes (WARNING CODE) is not required.

<When replacing major components> When
replacing major components, it is necessary to register the serial number of the new part and the error code information. Pages 6 - 7 show how the serial number
can be determined. • OPM module or OPM unit • Main board (PWB-1) • Power supply
(ACDC module) • Laser initiation board
(PWB-7) • Laser source (LSA) • LED
light source (LSB) • Reflector (LSA-M)

(2) Determining if a repair is chargeable • The
laser source warranty period is up to three years from the date of purchase or up to 6000 hours from the date of purchase.
the first time the laser source is turned on, whichever ends first.
• The warranty period for the projector is three years from the date of purchase. (Warranty does not cover failures due to negligence or misuse).

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(1) Checking whether the failure information provided by users can be applied. (2) Checking the error code and performing the troubleshooting procedure according to the error information and the error code

• View error codes ÿ see page 12 for details. • Troubleshooting ÿ see page 61 for details.

Notes on replacing the main board, OPM module, and laser source (1) When replacing the main board, temporarily completely clear the memory and re-enter the lamp and device run time. (2) If the projector does not turn on and it is not possible to set the operating time of the lamp and the device, enter the approximate time calculated since the repair of the device. If you don't know the runtime, enter the usage time as a number between 50 - 100 hours and enter that value.

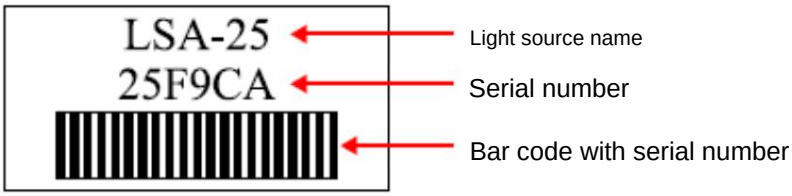
NOTE: If you set the lamp time to zero, the "Replace the lamp" message will not appear when the lamp reaches the end of its life.

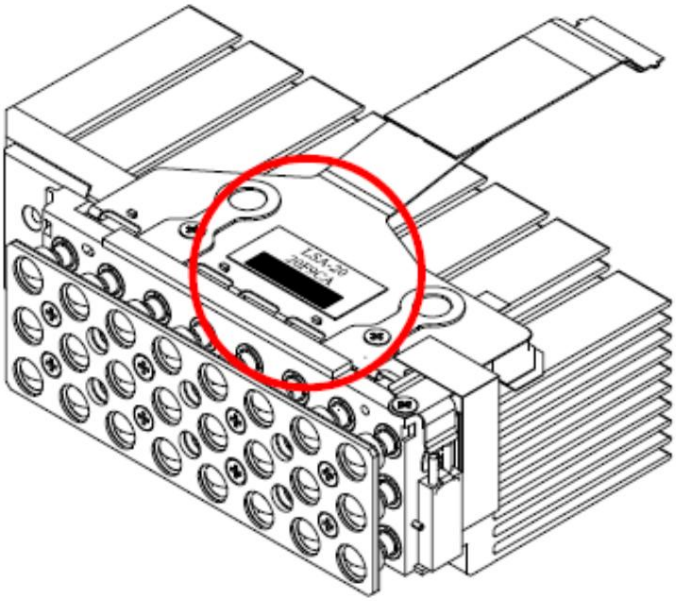
(3) When installing a new laser source module, set the accumulated lamp time to zero. When replacing the OPM module or the main board, leave the total lamp time unchanged.

4-3. Type of laser source and how to identify it The XJ-A240/A245 projectors use the following laser source.

Laser source name		Models
LSA-25	**Brightness** 2500 ANSI Lumens	XJ-A240/A245

A sticker is attached to the LSA module to identify the type of laser source.





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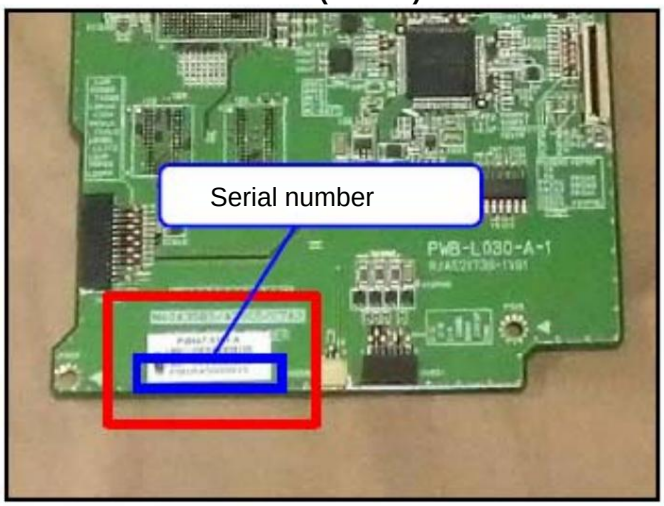
4-4. Determining the serial numbers of major components

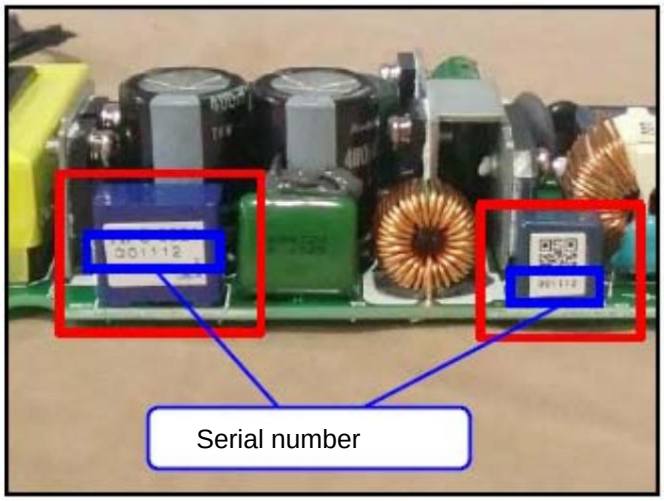
Main board (PWB-1)



The alphanumeric characters below the barcode are the serial number.

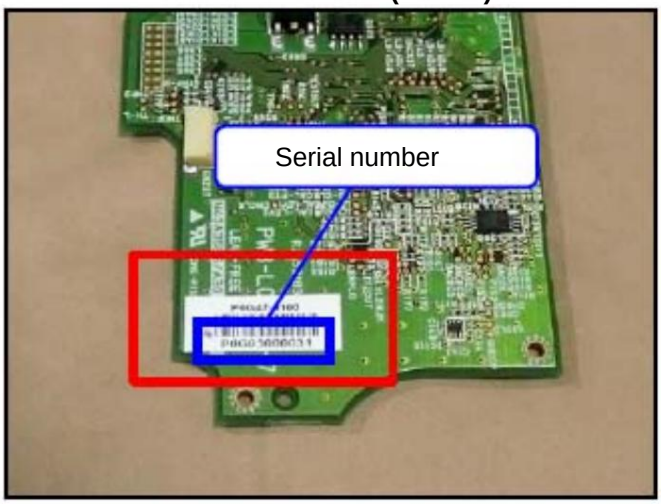
ORM module / ORM block

Power supply (ACDC module)



The number below the QR code is the serial number. Two stickers are placed in two different places. The serial number is on both stickers.

Laser Initiation Board (PWB-7)



The alphanumeric characters below the barcode are the serial number.

LED Light Source (LSB)

Reflector (LSA-M)

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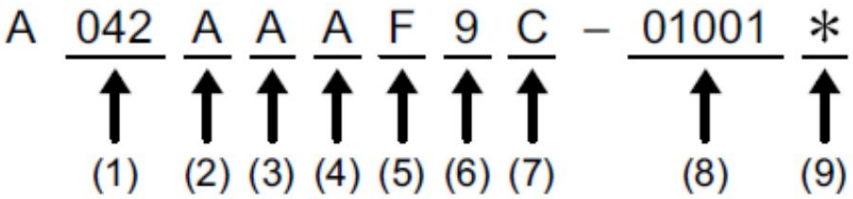
4-5. Collection of defective parts (1) The
defective parts of the following components must be collected. • OPM module or OPM unit •
Main board (PWB-1) • Power supply
(ACDC module) • Laser initiation
board (PWB-7) • Laser source (LSA) •
LED light source (LSB) • Reflector (LSA-M)

(2) Send assembled modules to the company
Casio Computers Co, Ltd.
Overseas Service Division

4-6. Designations in the serial number



ÿ	Description
1	Model: 042: XJ-A240, 043: XJ-A245 **2** A -
history of hardware changes. Z is a sample of the goods being sold.	
3 A - history of software changes. Z is a sample of the goods being sold.	
4 History of other changes. Z is a sample of the goods being sold. **5**	
Factory name **6** Last digit of	
the year (in this case: 2009 ÿ 9). **7** Shipping month: 1-9, A, B, or C (in this	
case: May ÿ 5, October ÿ A, November ÿ B, December ÿ C). **8** Serial number: Starting from 1001.	
9 Checksum sign	

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4-7. Using Diagnostic Software to View Lamp/Device Hours and Error Codes

(1) Connect the power cable to the projector and wait for the [POWER] LED to turn yellow.

(2) Press the [(POWER] button on the remote control or on the projector to turn it on.

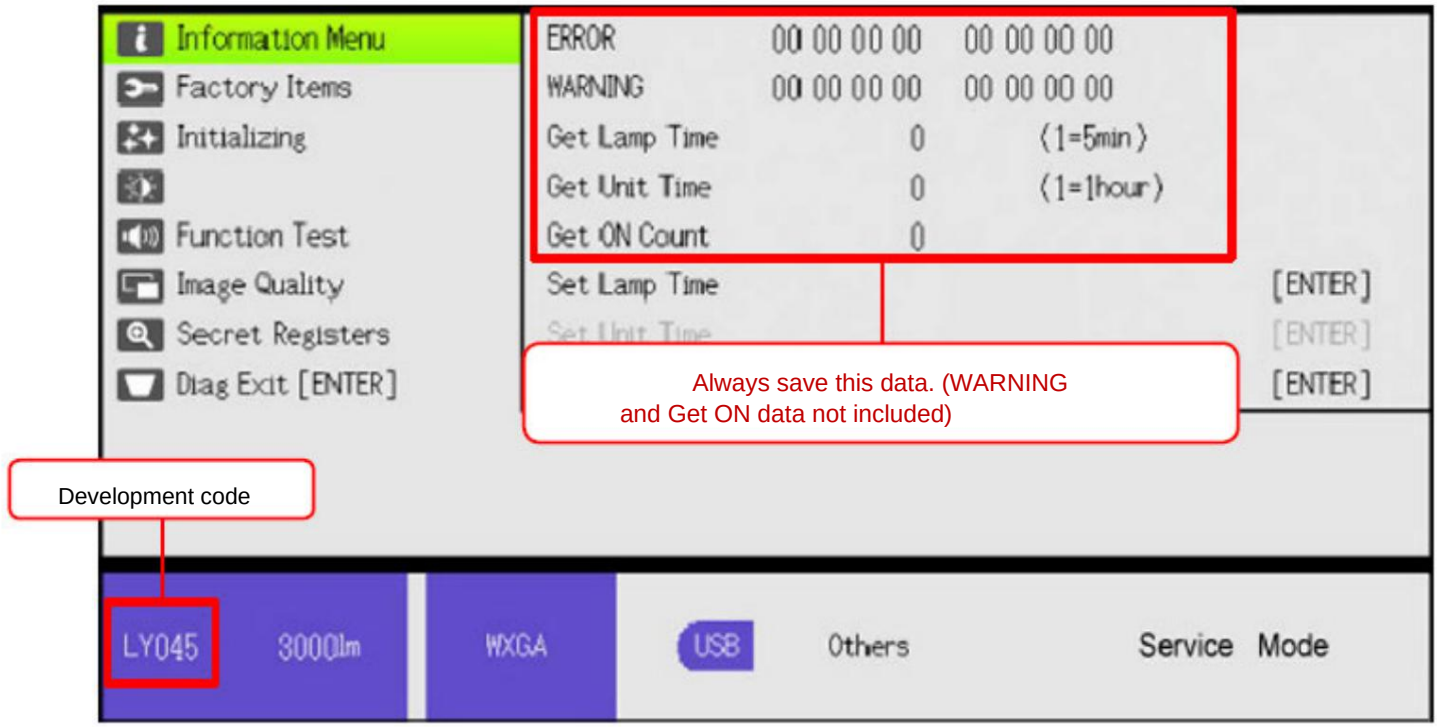
(3) Follow the steps below to run the diagnostic program.

Step 1. Press the [ENTER] and [ ] buttons simultaneously.

Step 2 After pressing the buttons as described in step 1, press and hold the [INPUT] button for 2 seconds. (a total of 3 buttons must be held down).

Step 3 Release all buttons except the [INPUT] button.

(4) The diagnostic program menu will appear.



ERROR	Error code number.
Get Lamp Time	Lamp duration. The duration of
Get Unit Time	the device.

The model is specified with the development code.
LY042: XJ-A240 LY043: XJ-A245

(5) To view the ROM version information, select "Function Test" ÿ "ROM CHECK". (6) To exit the diagnostic program, move the cursor to "Diag Exit [ENTER]" and press the [ENTER] button.

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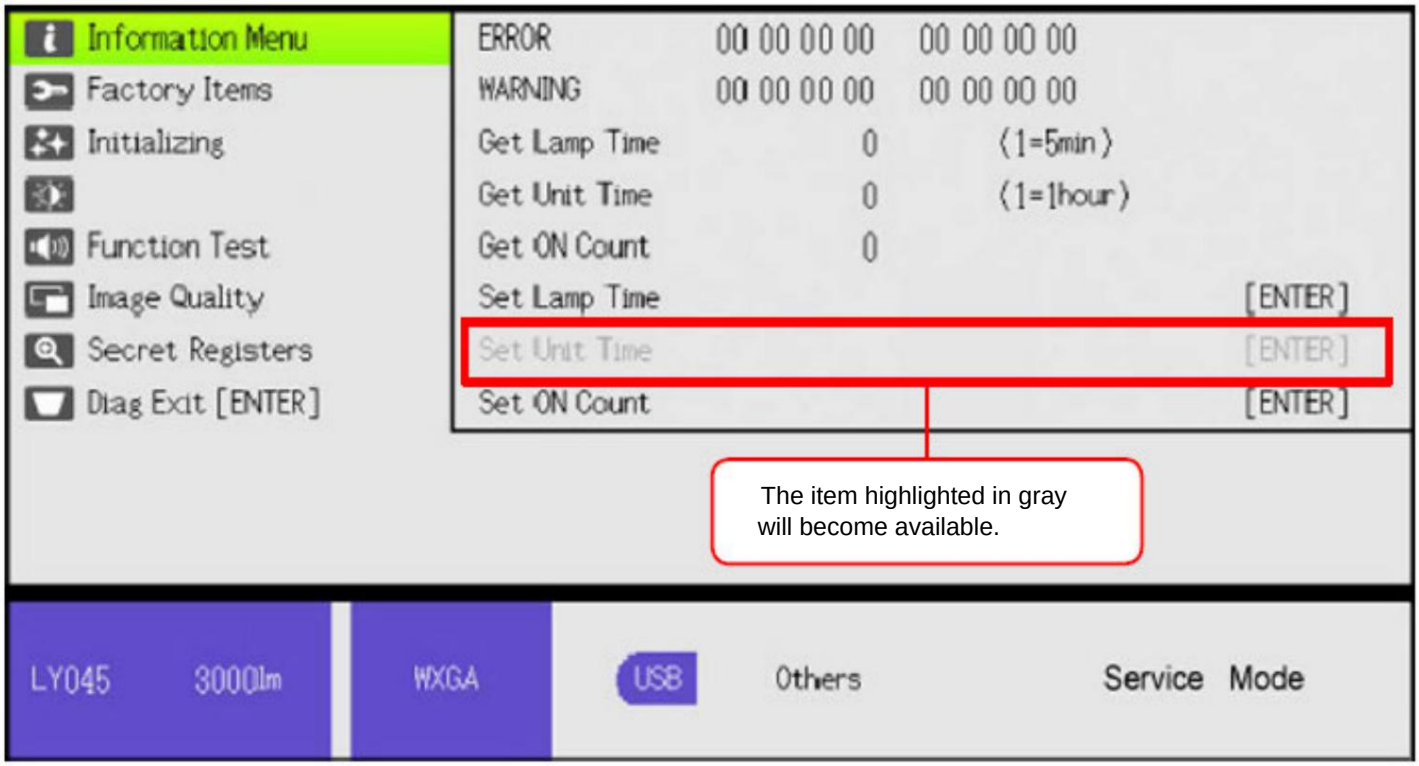
4-8. Setting device time

(1) Move the cursor to "Information Menu" in the main menu and press the [ENTER] button. (2) On the main unit, press the [AUTO], [INPUT],
[FOCUS] and [MENU] buttons at the same time. (This item cannot be performed using the remote control). (3) The gray text "Set Unit Time" will change color to black, its use

will become possible.

NOTE: after activating the "Set Unit Time" line, it will remain active until exiting the diagnostic program.



(4) Move the cursor to "Set Unit Time" and press the [ENTER] button to change the unit time.

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5. PASSWORDS

The password protection function provides protection against unauthorized use of the projector.

5-1. About the password protection function • The password
can only be entered using the buttons on the remote control. (in case of loss
remote control, the password cannot be entered).
• When shipped from the factory, the following password is set: [INPUT], [AUTO], [BLANK], [FREEZE],] (button
[ ] (cursor up button), [cursor right).] (Down cursor button), [ ] (Left cursor button), [

• You can set/change the password by going to "Setup Menu" ÿ "Device Settings 1" ÿ "Power On Password". • The password can
only be changed after entering the correct password set at the factory. • After selecting “Power On
Password”, the password input window appears every time the power is turned on. If this function is selected, you cannot use
any of the device's functions without entering a password.

5-2. Deleting Passwords (Confidential - For Home Use Only) NOTE: Under no circumstances should users
delete passwords, nor should they be told how passwords are deleted. If users are interested in the password removal method, it
is forbidden to give them such information, password removal should be carried out only with the knowledge of Casio.

If a user asks to remove a password, the user must be warned that: • Passwords and settings
will be reset to factory defaults. • The user will have to pay a fixed fee (fee for minor
repairs).

Passwords can be cleared in two ways: (1) Using the
"Initializing" menu option in the test program to initialize the projector and reset the password to factory default. Please note that
this will erase other settings and lamp hours. Always
write down the setup data before initializing the projector so that you can restore it later. (2) The "Setting Backup Tool" menu item
can be used to check and change the password. For details, please refer to "9.7 Uploading Backup

data".

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6. ERROR CODES

6-1. Error Codes Separate
logs store information about fatal errors that caused the projector to turn off (ERROR) and non-fatal errors that did not turn off the projector (WARNING). Each log stores up to 8 recent events. No matter how many non-fatal errors occur, the fatal error log is not overwritten (and vice versa). The user can determine the relationship
between errors and events in the "ON count" menu provided in the counter for each section.

Example:

<Fatal error log (ERROR)>

Code Counter	
Latest Event	10 On count 02
1 Event 2	10 On count 05
Event 3 Event	80 On count 10
4 Event 5	
Event 6 Event	
7	

In this case– (2)

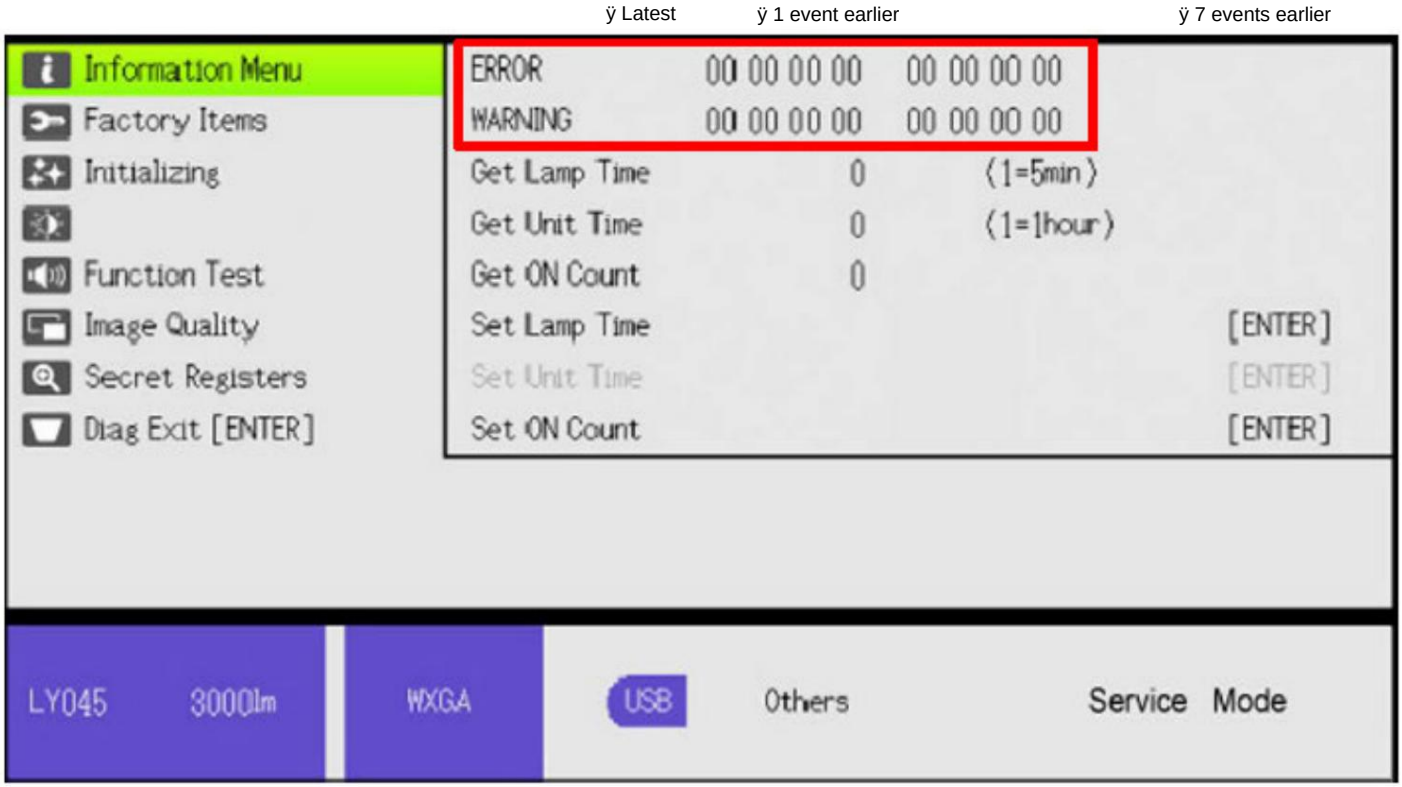
<Non-fatal error log (WARNING>)

	Code	Counter	
Latest Event	50	On count 09	In this case - (1)
1 Event 2	50	On count 09	
Event 3 Event	50	On count 10	
4 Event 5	50	On count 10	In this case– (2)
Event 6 Event	50	On count 10	
7	50	On count 10	

In this case - (1): for "ON count 09", error 50 occurred twice, but the readings did not change. In this case - (2): For "ON count 10", error 50 occurred 4 times, followed by error 80, and the projector turned off.

6-2. Viewing Error Codes To run the
diagnostic program, see “4-7. Using the Diagnostic Utility to View Lamp/Device Hours and Error Codes.

Fatal error (Projector turns off) Non-fatal error	ERROR	86	41	00	00	00	00	00	00
(Projector continues to operate)	WARNING 50		00	00	00	00	00	00	00



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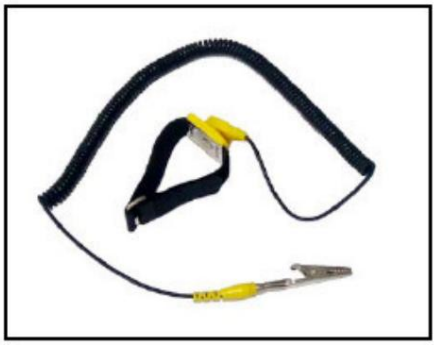
7. DISASSEMBLY

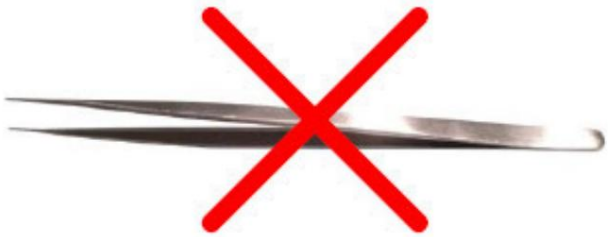
7-1. IMPORTANT INFORMATION This
product uses a laser as a light source. When disassembling the device, observe the following precautions. • Before disassembling, turn off the power and unplug the AC power cord from the outlet. • If it is necessary to perform
a power-on test during repair, before starting the test,

install the top cover.
• Never look into the laser light source (LSA) while the power is on. • Before removing the cover of the laser light source to replace it, turn off the power and disconnect
AC power cable from the outlet.

• Please note that the device described in this manual may differ from the one you have.
due to design changes.
• When assembling/disassembling the projector, use conductive gloves, rubber fingertips, or an antistatic wrist strap to prevent static electricity and dirt from getting on your hands.



• Do not use metal tweezers. Use only plastic tweezers with flat
sponges (it is recommended to use antistatic tweezers).



• Surfaces (especially the top surface) are easily scratched, so when disassembling or assembling, place
under the projector with a soft cloth or rug.
• There are several types of screws. When reassembling, make sure you are using the correct type of screws. It is recommended to sort the screws after removing them, as shown in the figure below.

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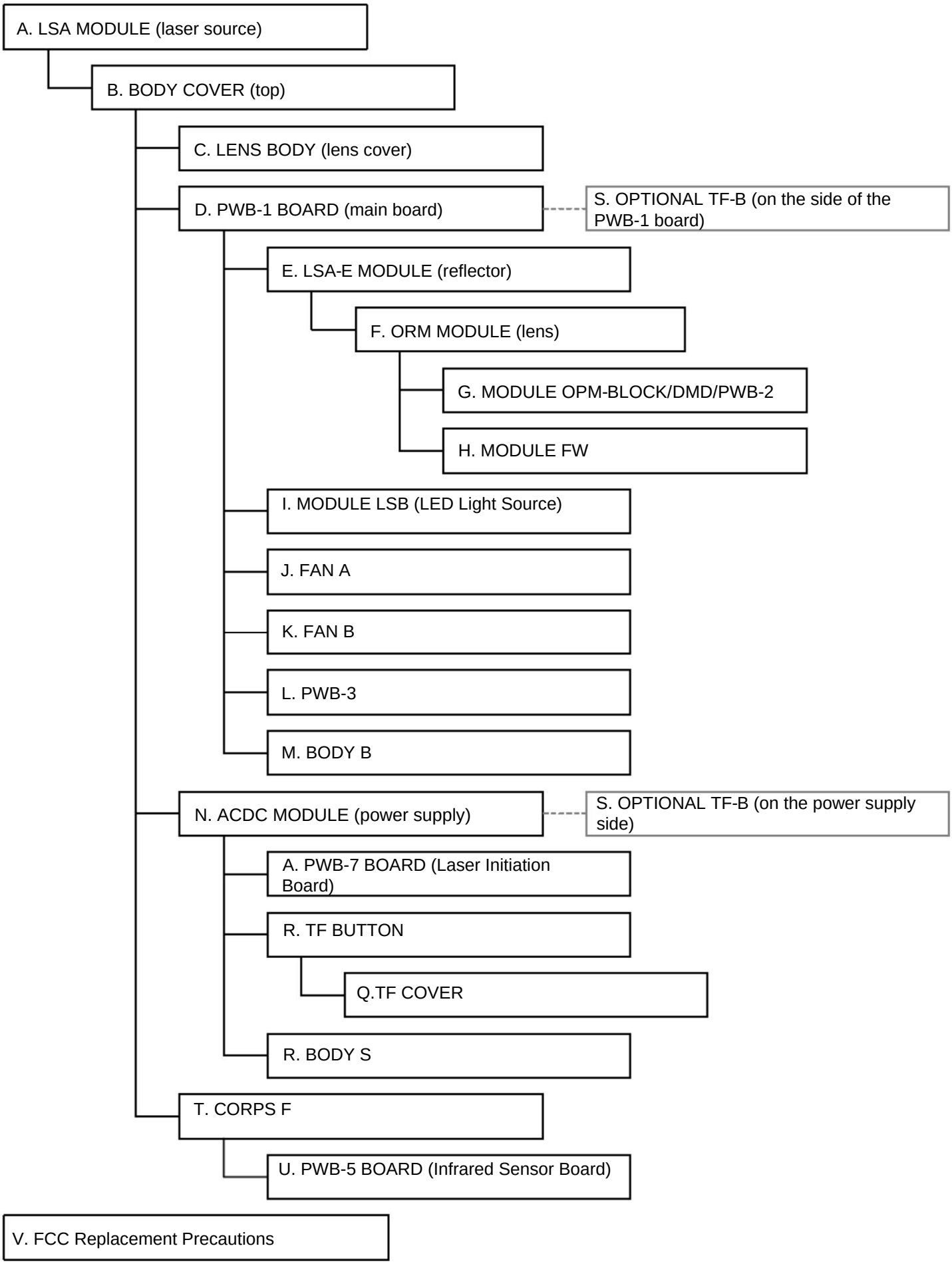
7-2. block diagram


A. LSA MODULE (laser source)
B. BODY COVER (top)
C. LENS BODY (lens cover)
D. PWB-1 BOARD (main board)
S. OPTIONAL TF-B (on the side of the PWB-1 board)
E. LSA-E MODULE (reflector)
F. ORM MODULE (lens)
G. MODULE OPM-BLOCK/DMD/PWB-2
H. MODULE FW
I. MODULE LSB (LED Light Source)
J. FAN A
K. FAN B
L. PWB-3
M. BODY B
N. ACDC MODULE (power supply)
S. OPTIONAL TF-B (on the power supply side)
A. PWB-7 BOARD (Laser Initiation Board)
R. TF BUTTON
Q.TF COVER
R. BODY S
T. CORPS F
U. PWB-5 BOARD (Infrared Sensor Board)
V. FCC Replacement Precautions

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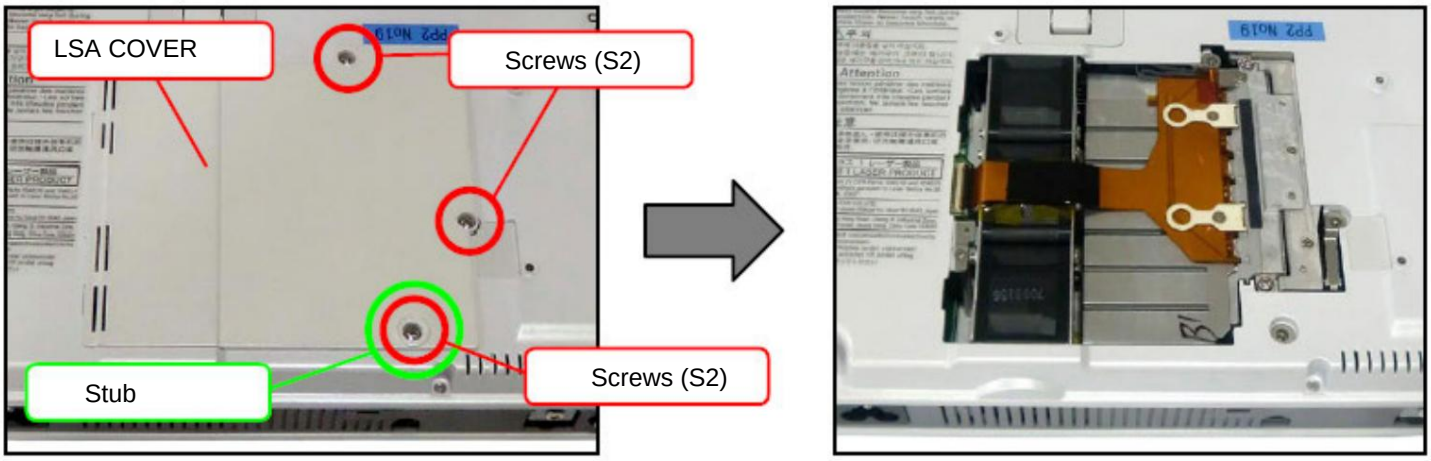
A. LSA MODULE (LASER SOURCE)

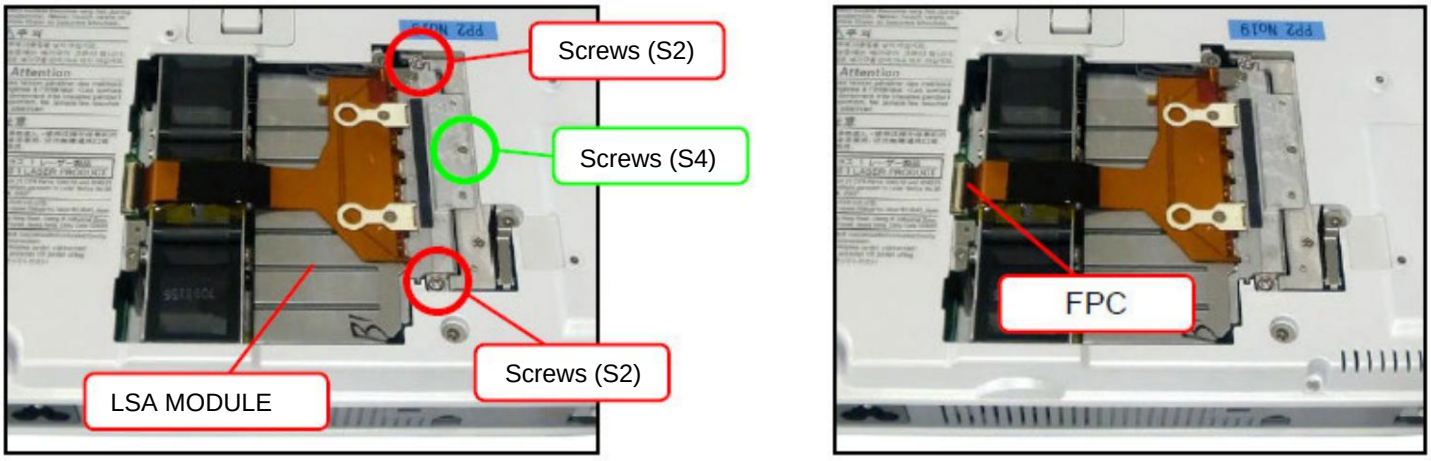
NOTE: The LSA module is sensitive to static electricity. It needs to be handled with care. A-1. Remove the plug. **<ASSEMBLY NOTE: LSA MODULE>**

• If there is visible damage to the plug or if the plug is difficult to install, use new plug, reuse of the old plug is not allowed. A-2. Loosen the screws (S2), then remove the LSA cover.

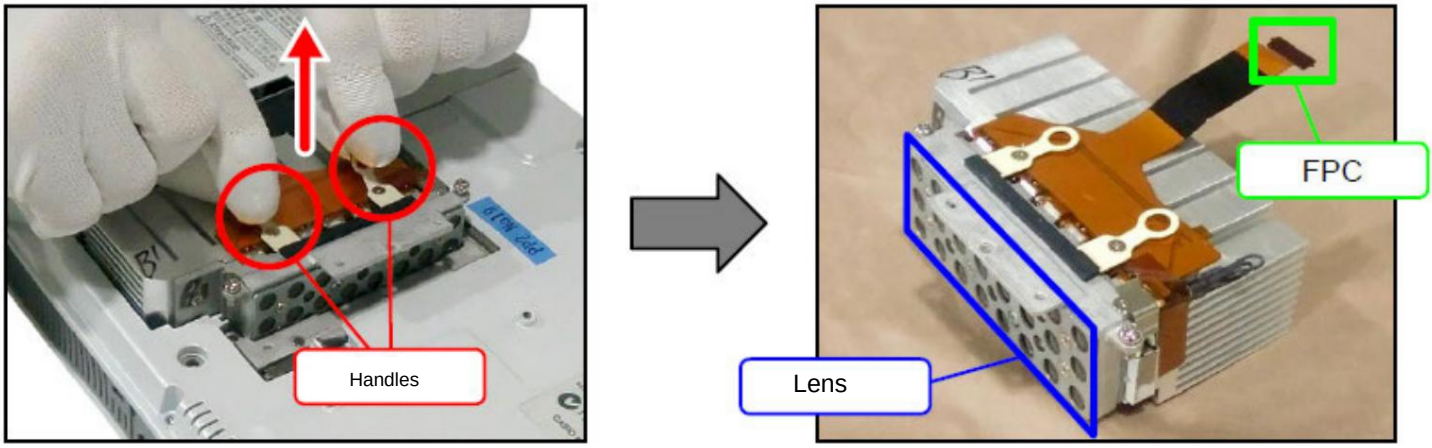


A-3. Loosen two screws (S2).
A-4. Unscrew the screw (S4). A-5. Release the latch and remove the FPC cable.

NOTE: The connector lock is very fragile. Be careful when removing the FPC cable.



A-6. Hold the LSA module by the handles and remove it.
NOTE: Do not strip the FPC cable cover. **NOTE:** Do not touch the lens and FPC cable outlet.



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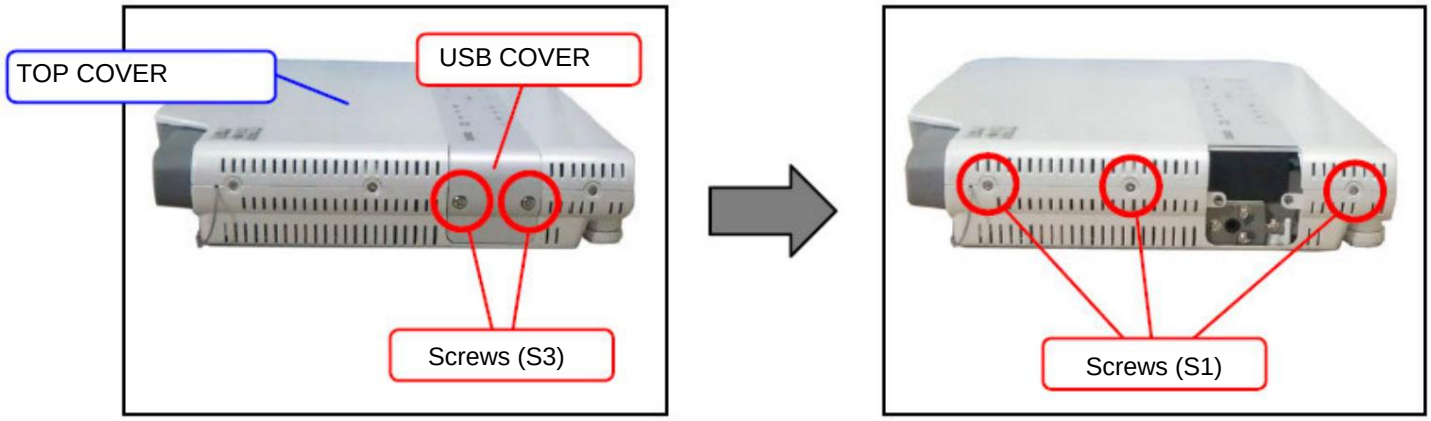
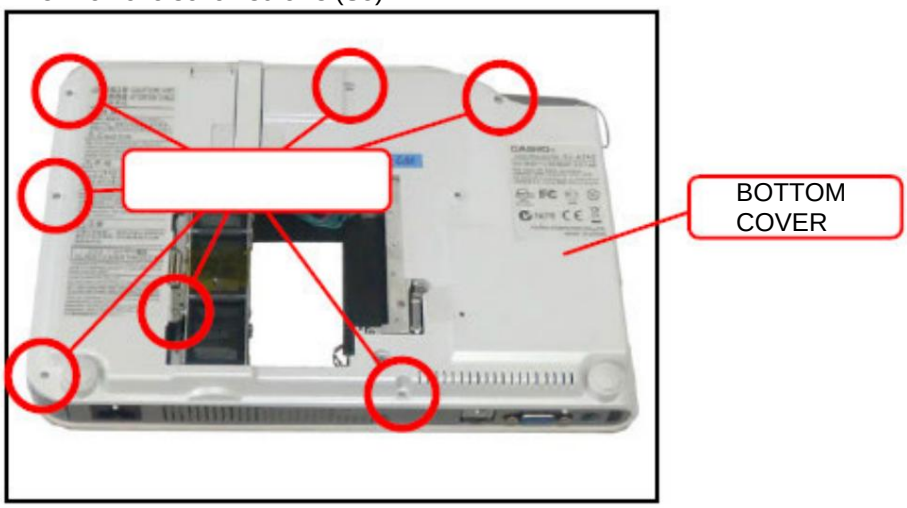
B. TOP BODY COVER B-1. Unscrew the two screws (S3) and remove the USB cover. **NOTE:** If necessary, remove the wireless adapter (YW-3). (Only for model XJ-A245). **<ASSEMBLY NOTE: TOP COVER (XJ-A245 only)>**

- If the wireless adapter is installed during disassembly, be sure to reinstall it after reassembly. AT 2. Remove three screws (S1).



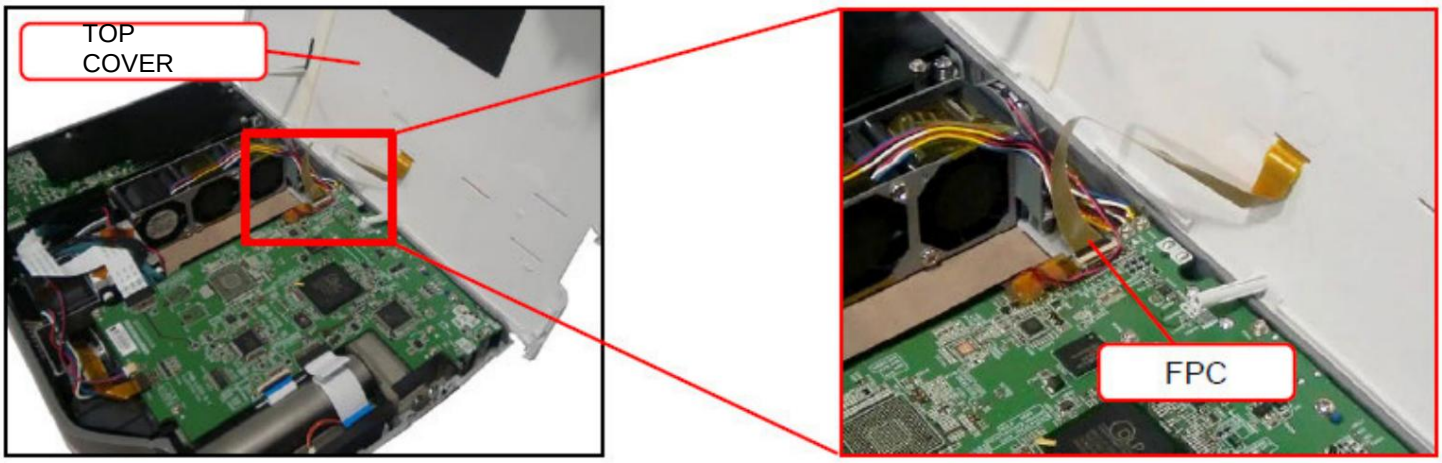
AT 3. Remove seven screws (S5).



AT 4. Open the top cover. **NOTE:**

The top cover is connected to the main board via an FPC cable. Be careful when opening the device. AT 5. Release the latch and remove the FPC cable.

NOTE: The connector lock is very fragile. Be careful when removing the FPC cable. AT 6. Remove the top cover.



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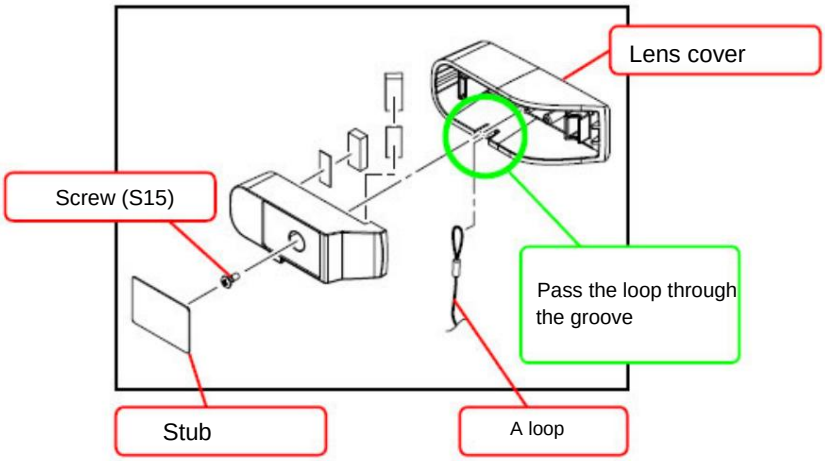
C. LENS COVER C-1.

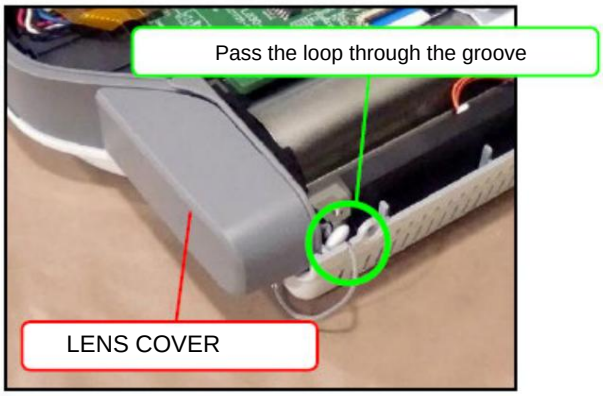
Remove the lens cover. C-2.

Remove the plug and unscrew one screw (S15).

<ASSEMBLY NOTE: LENS COVER>

- Pass the loop through the groove in the lens housing.
- When assembling the top cover, make sure that the hinge is not caught between the covers.

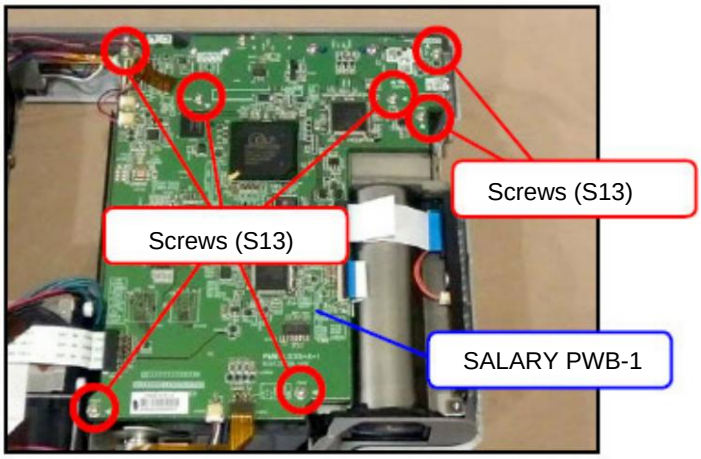


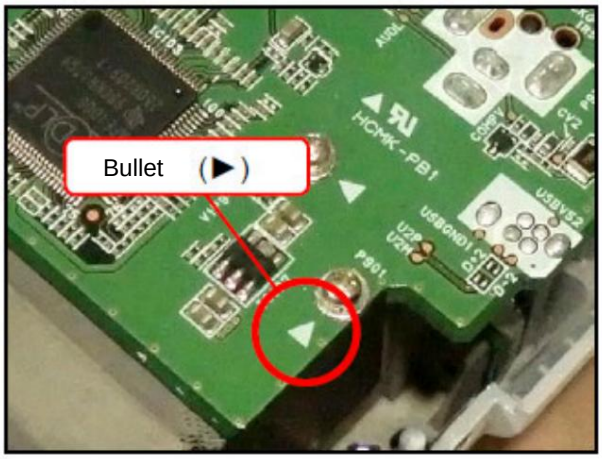


D. PWB-1 BOARD (Main board)

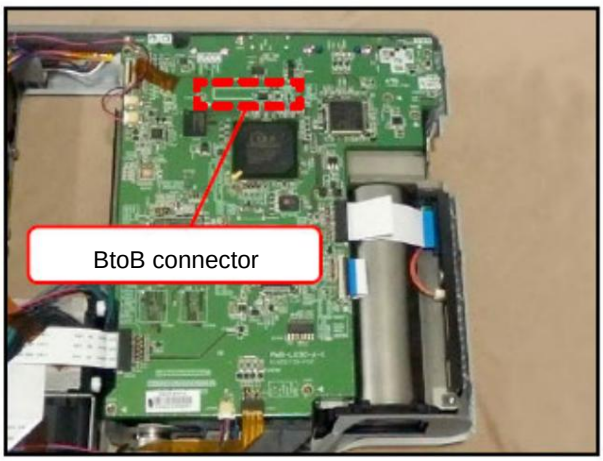
D-1. Remove seven screws (S13).

NOTE: The screws to be removed are indicated on the PWB-1 board by triangles (▶).





D-2. Slightly lift the PWB-1 board and disconnect the connector located on the back of the device. **NOTE:** The PWB-1 board is connected with a board-to-board (BtoB) connector.



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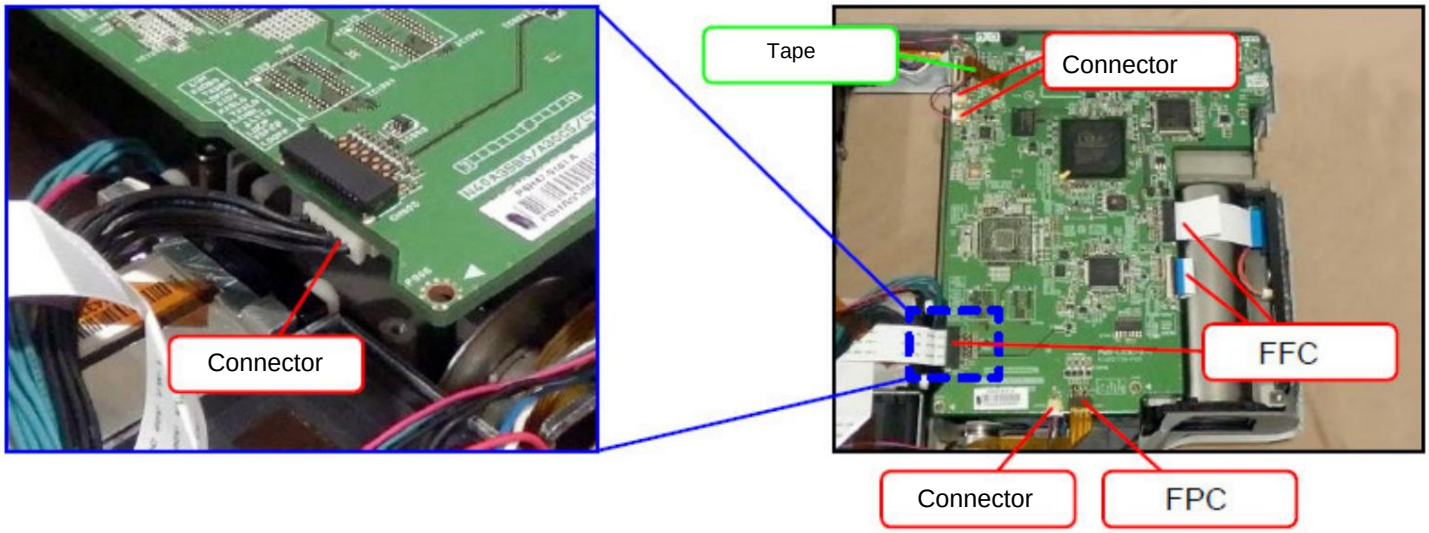
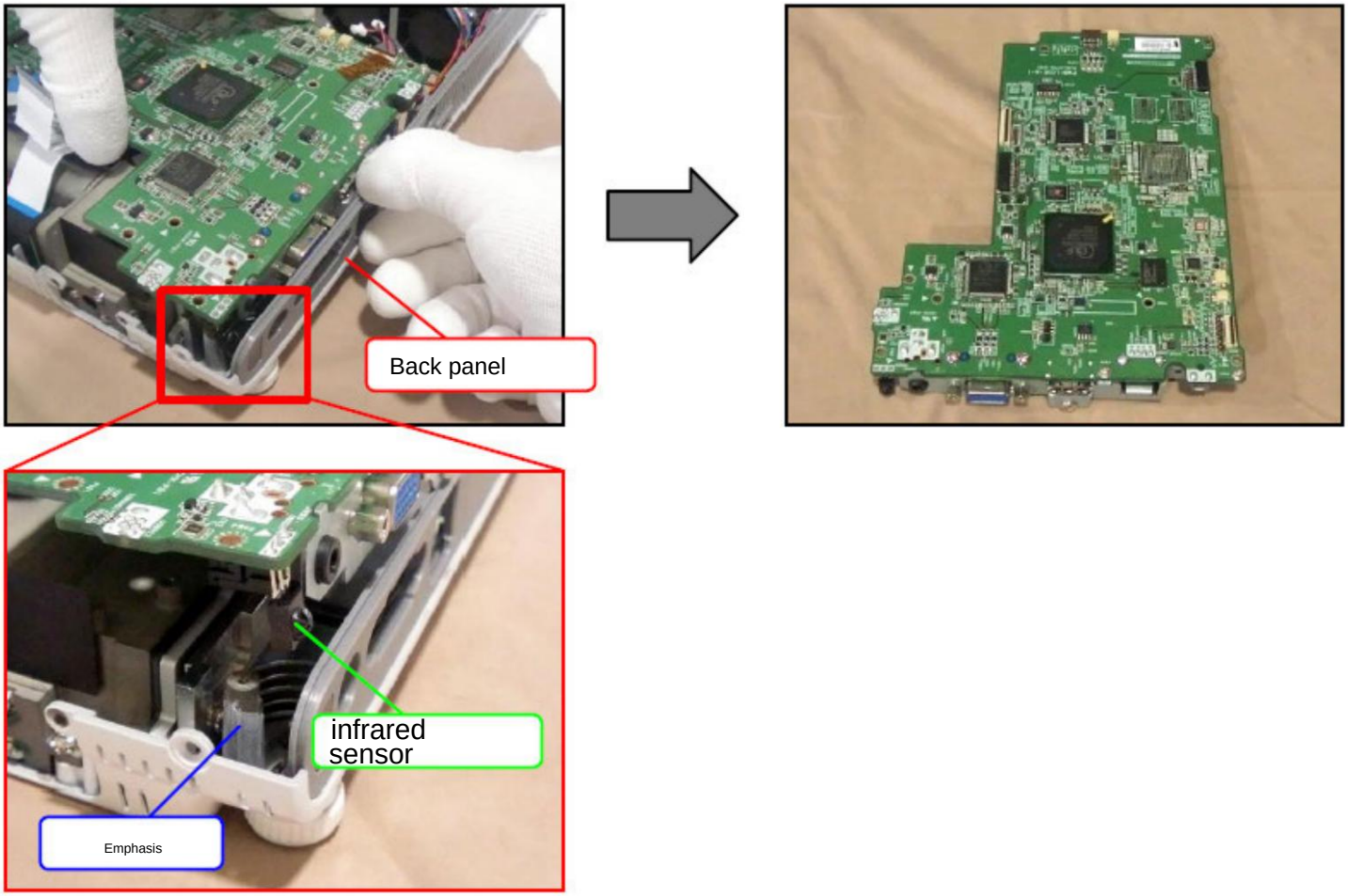
D-3. Remove the tape.

D-4. Disconnect four connectors, three FFCs and one FPC. **NOTE:**
The connector lock is very fragile. Be careful when removing the FFC cable. **NOTE:** The connector is connected to the back of the PWB-1 board.



D-5. With the rear panel slightly open, disconnect the PWB-1 board. **NOTE:**
When removing the module, make sure the IR sensor does not touch the stop or back panel.



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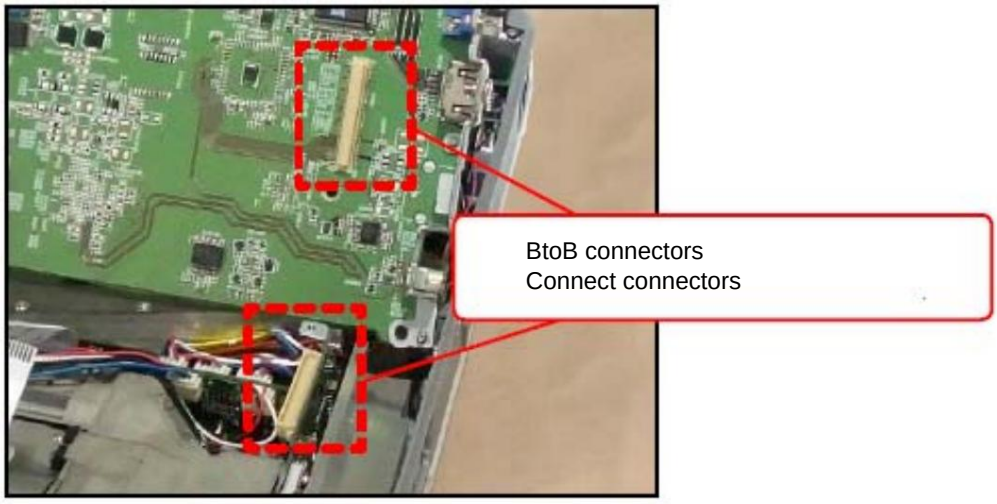
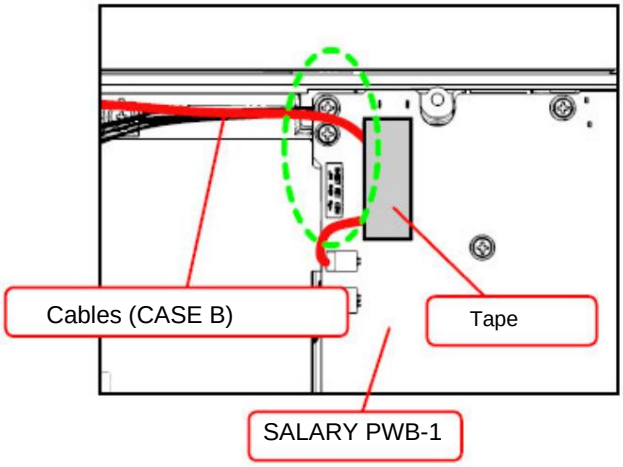
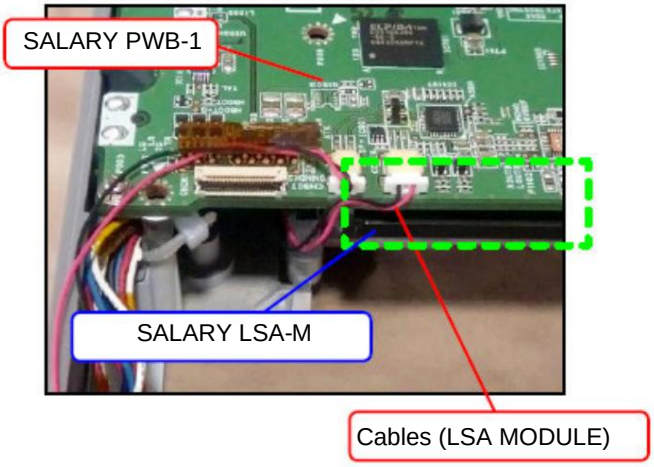
<ASSEMBLY NOTES: PWB-1 BOARD> • With the rear panel slightly open, assemble the PWB-1 board. • When assembling the unit, make sure that the infrared sensor does not touch the stop or the back panel. • Securely connect the board-to-board (BtoB) connector on the back of the PWB-1 board.

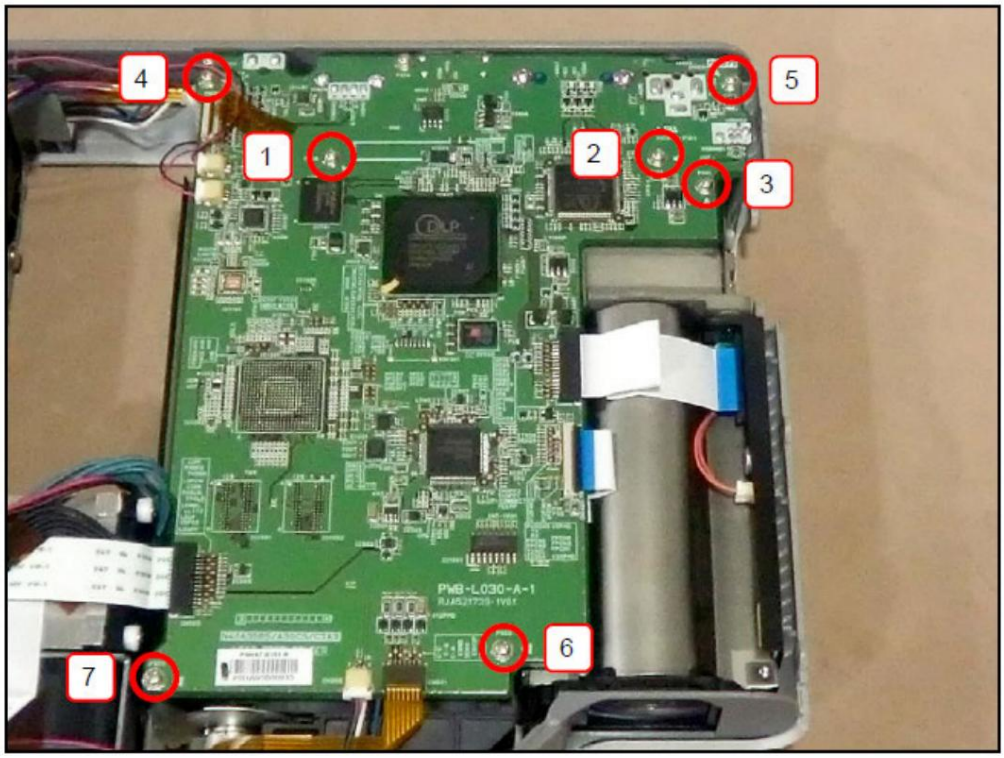


• When arranging the cables (CASE B), make sure that the screws and connectors are away from cables, secure the cables with tape. Route the cables (LSA module) inside the LSA-M board.





• When securing the PWB-1 board with the seven screws (S13), tighten them in the sequence shown numbers below.



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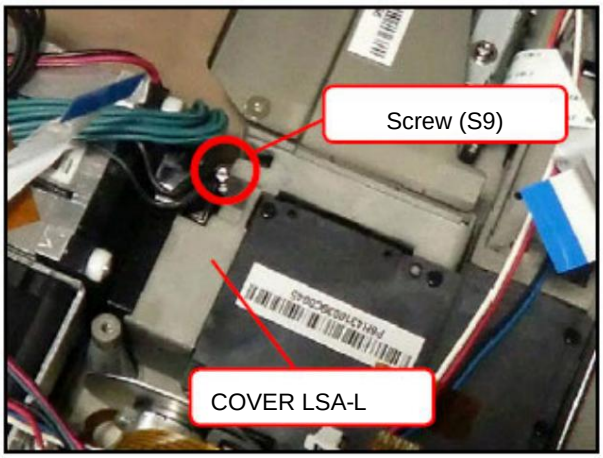
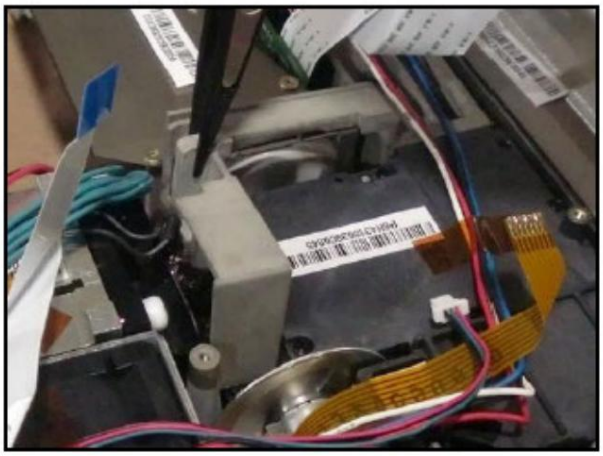
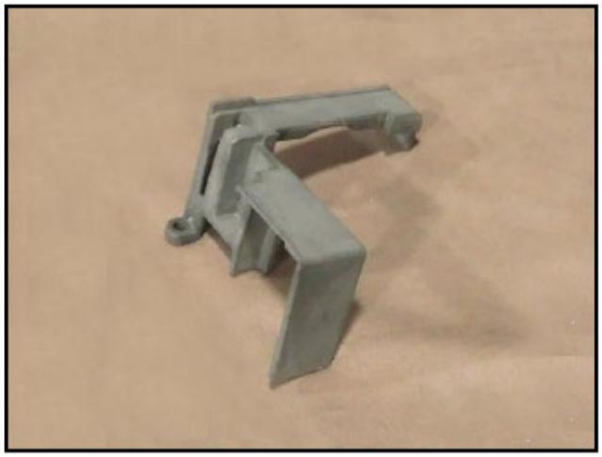
E. MODULE LSA-M (REFLECTOR) E-1. Unscrew one screw (S9) and remove the LSA-L cover.

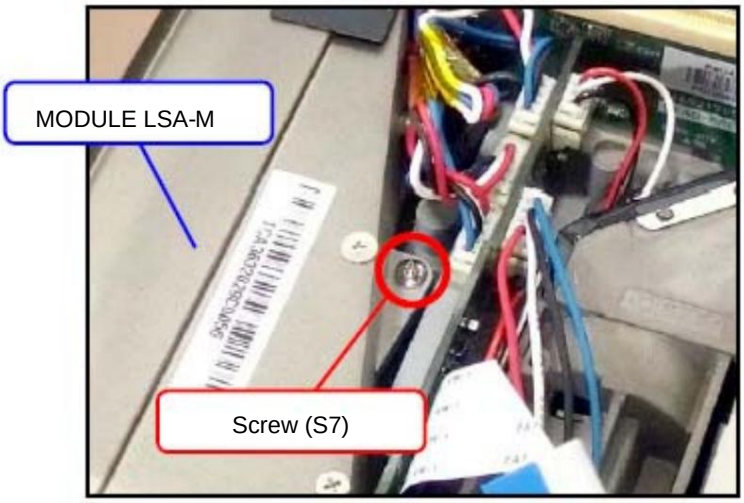
NOTE: When removing the LSA-L cover, make sure it does not come into contact with components located around her. **NOTE:** If the cover is difficult to remove, use a tool such as tweezers.







E-2. Unscrew one screw (S7).



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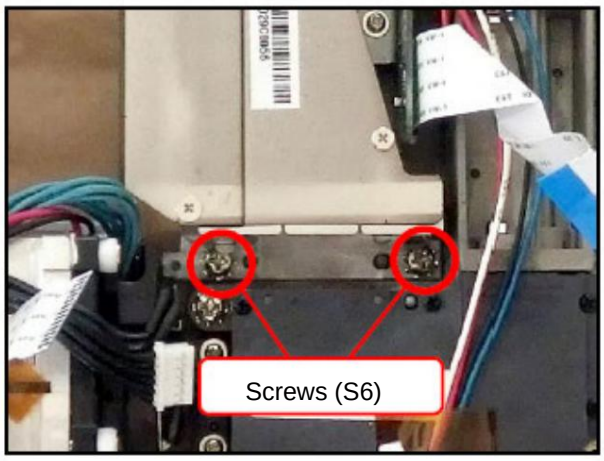
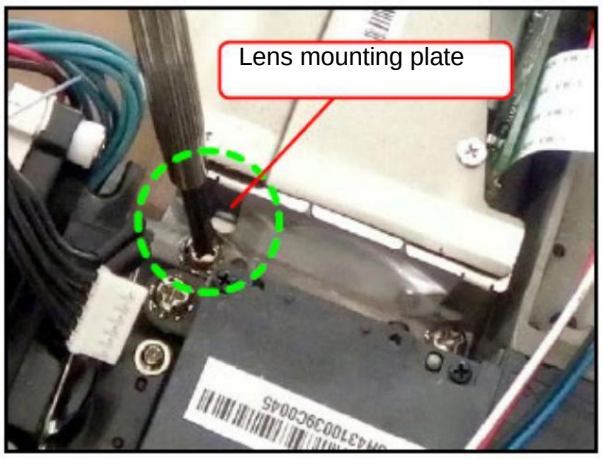
E-3. Unscrew the two screws (S6).

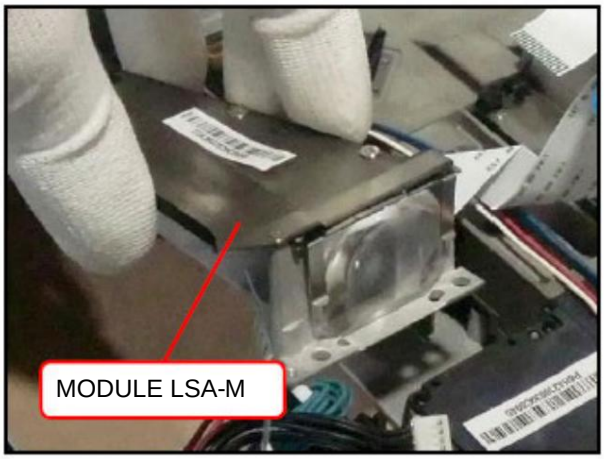
NOTE: Be careful not to touch the lens mounting plate with the screwdriver.

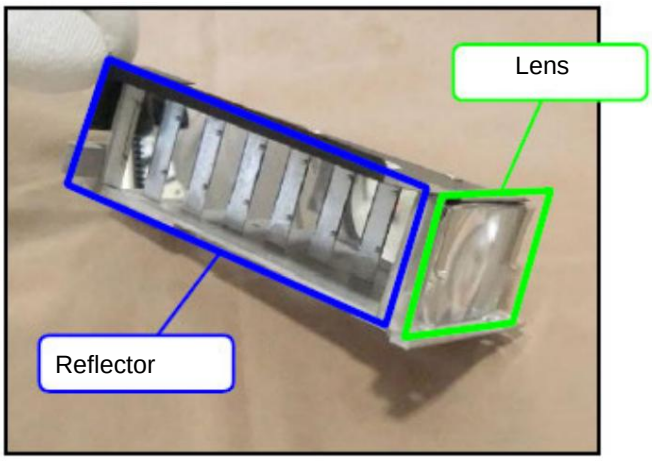


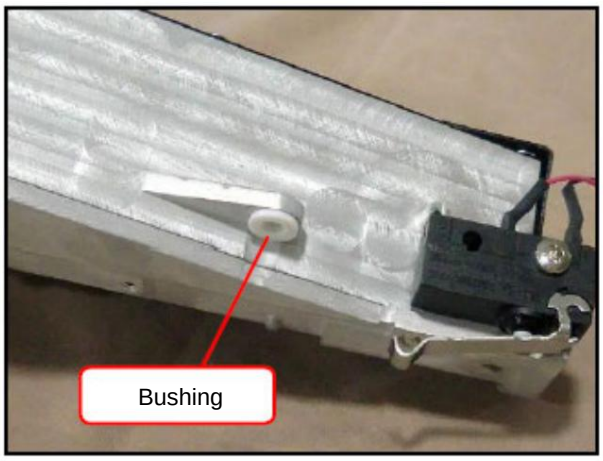


E-4. Remove the LSA-M module.

NOTE: Do not touch lens and reflector. **NOTE:** A bushing (S7) is installed in the screw hole. Don't lose her.







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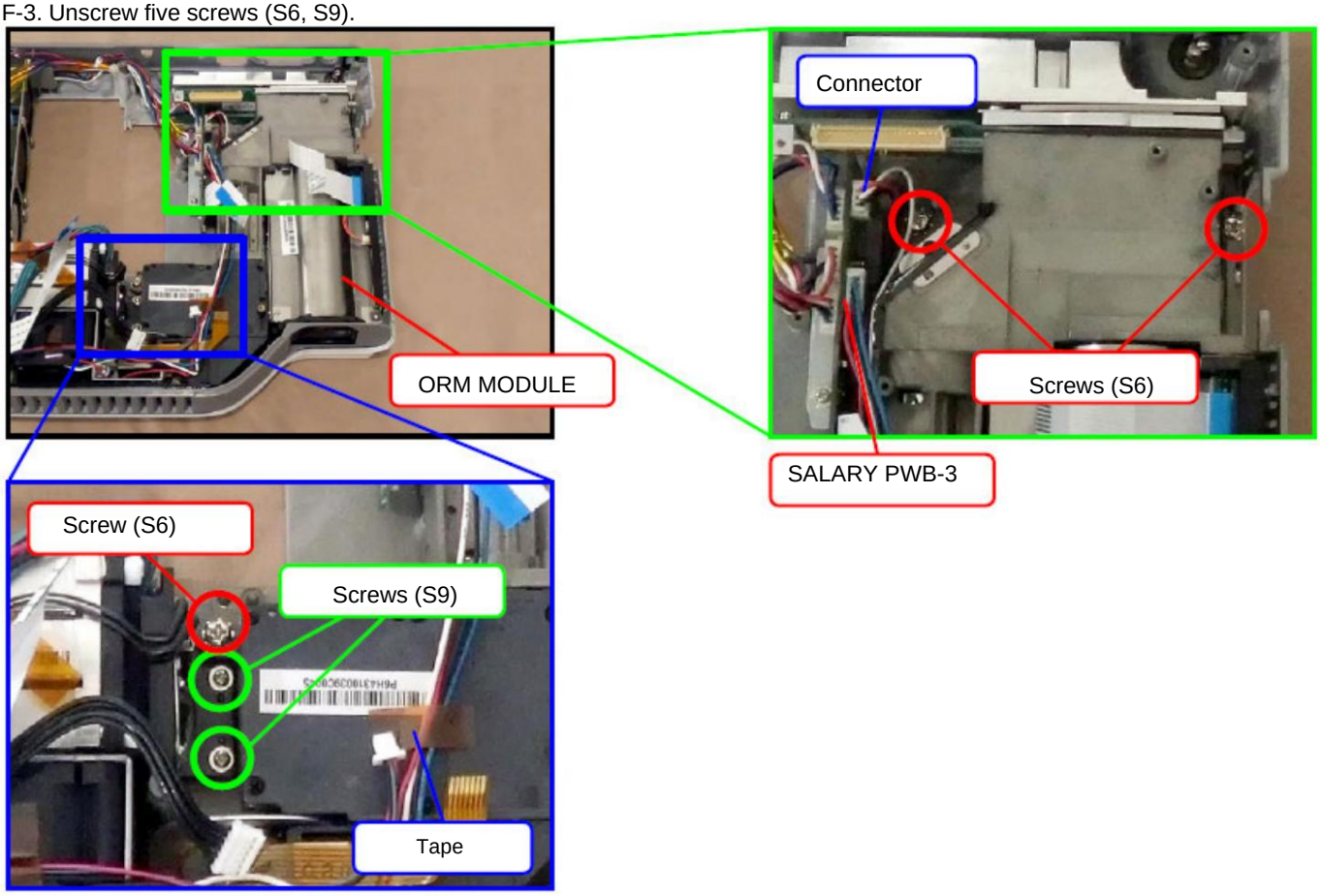
F. OPM MODULE

NOTE: Do not touch lens and reflector.

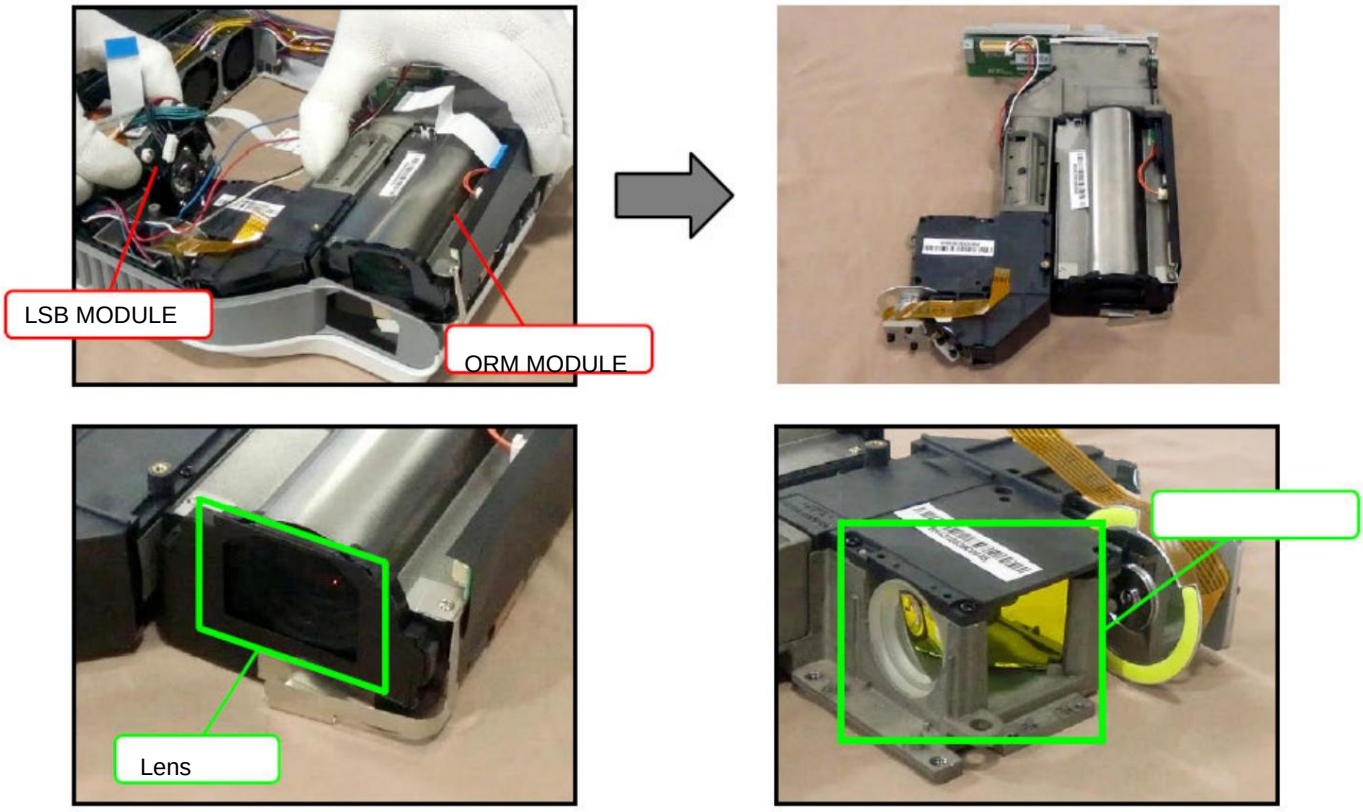
F-1. Disconnect the connector attached to the PWB-3 board.

F-2. Remove the tape securing the fan B cables.

F-3. Unscrew five screws (S6, S9).



F-4. Lifting the LSB module slightly, remove the OPM module. **NOTE:**
When removing the LSB module and the OPM module, be careful not to touch the components around them.



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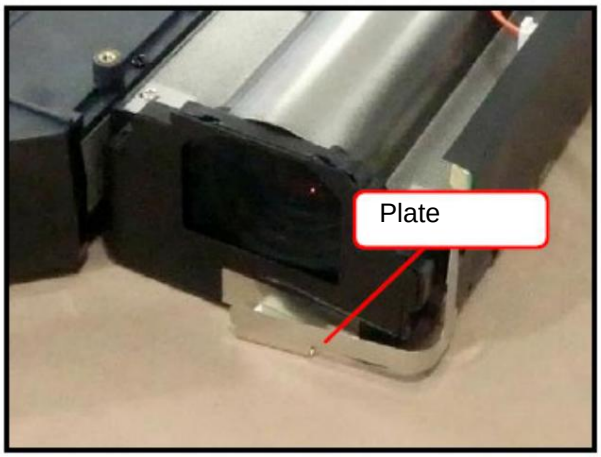
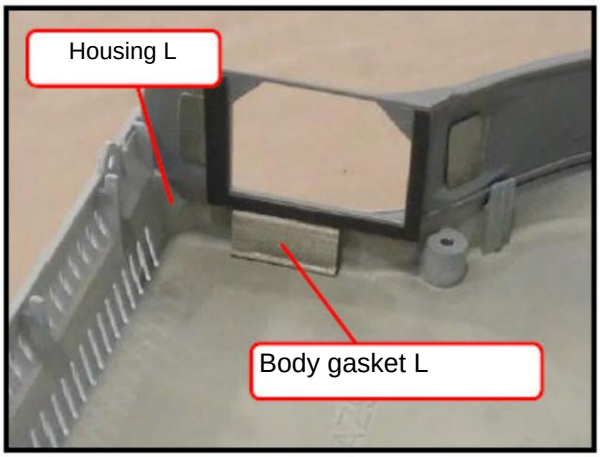
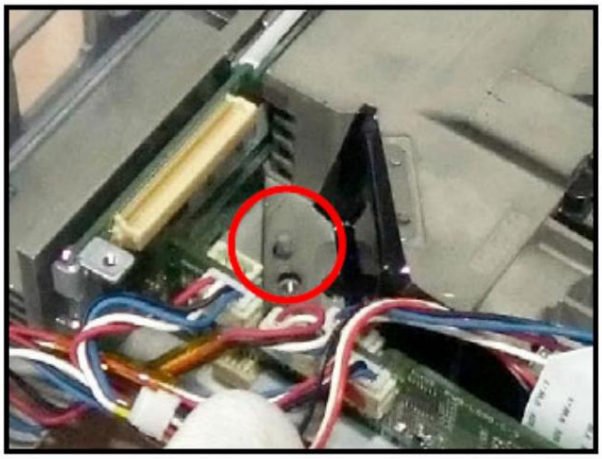
<ASSEMBLY NOTES: OPM MODULE>

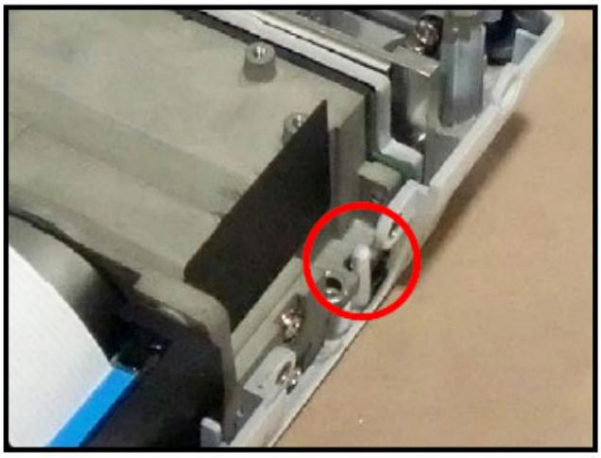
• Position the unit so that the plate touches the housing gasket L and assemble it.





• .Align the two stops and assemble.





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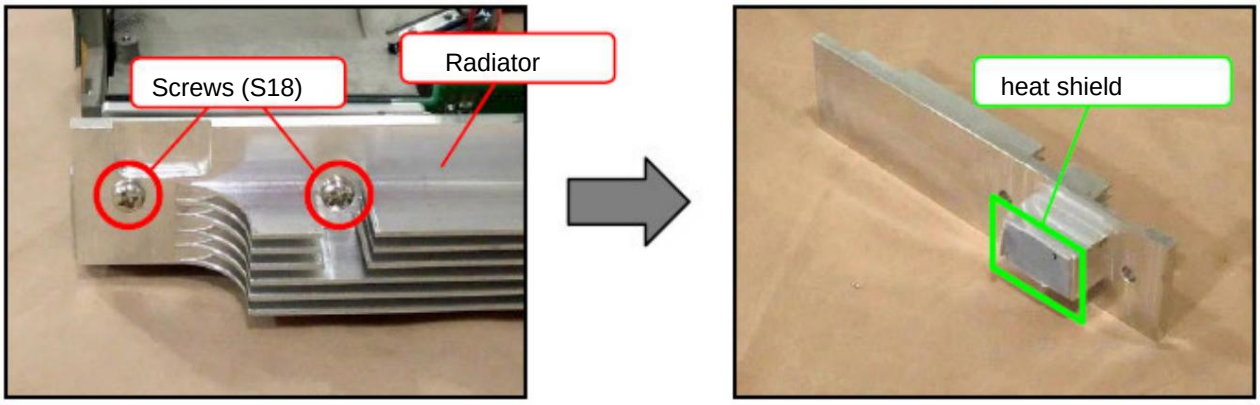
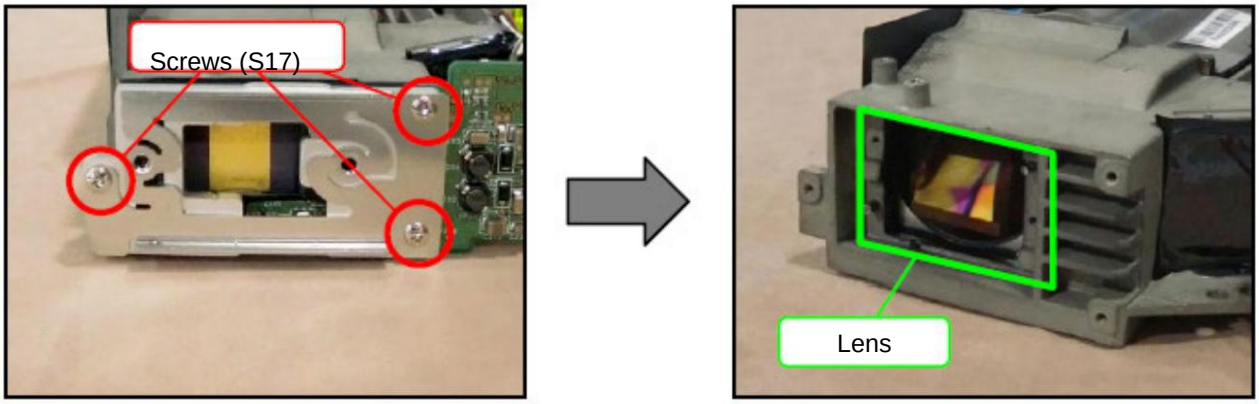
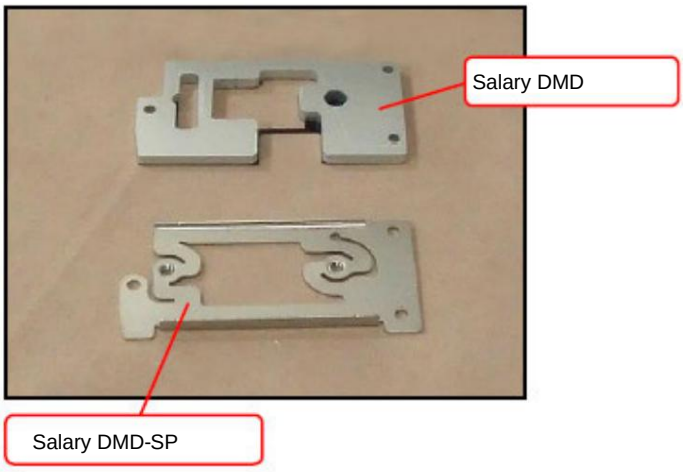
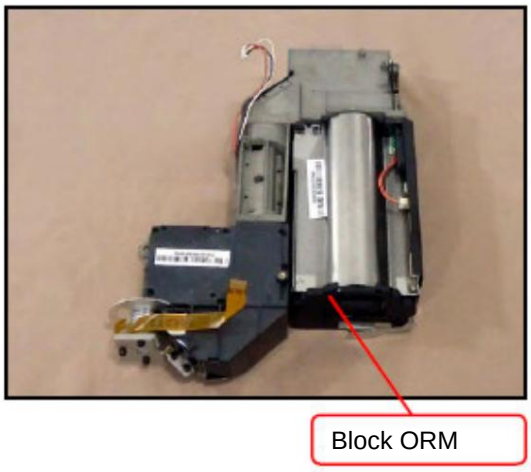
G. OPM/DMD/PWB-2 BOARD G-1. Unscrew the two screws (S18) and remove the heatsink. **NOTE:** Do not touch the heat shield attached to the heatsink.

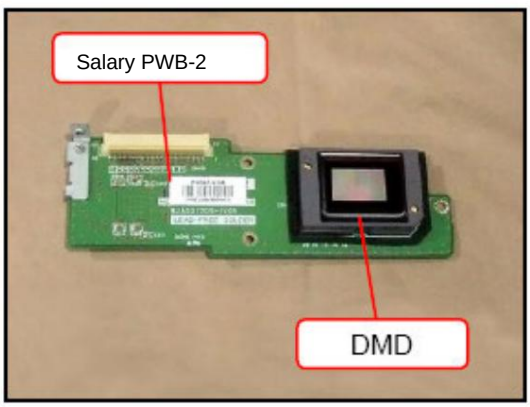


G-2. Remove three screws (S17), remove DMD, PWB-2 board, DMD board and DMD-SP board.
NOTE: Do not touch the DMD and lens.









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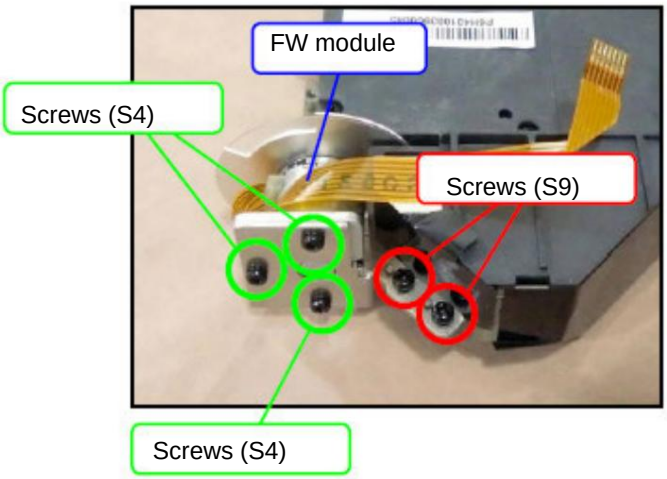
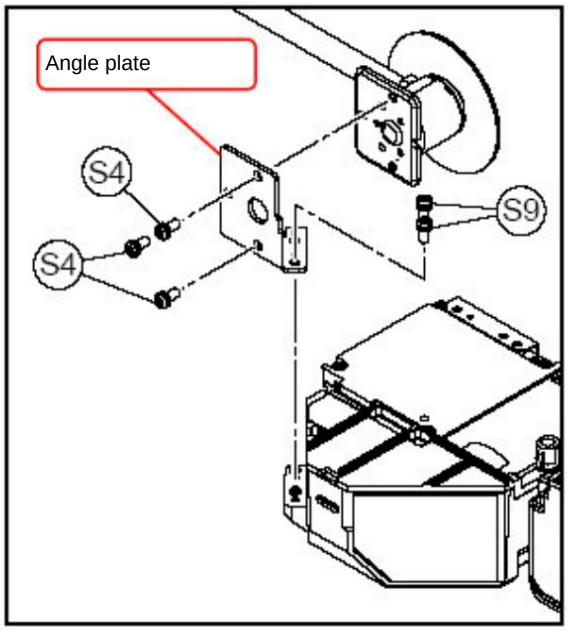
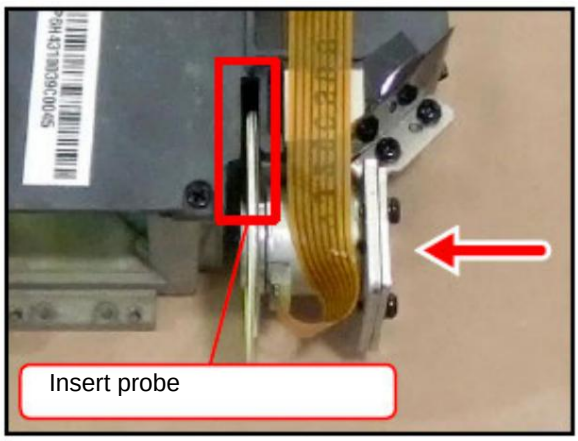
H. MODULE FW H-1.
Unscrew the two screws (S9) and remove the FW module together with the corner plate. H-2.
Unscrew the three screws (S4) and remove the FW module.

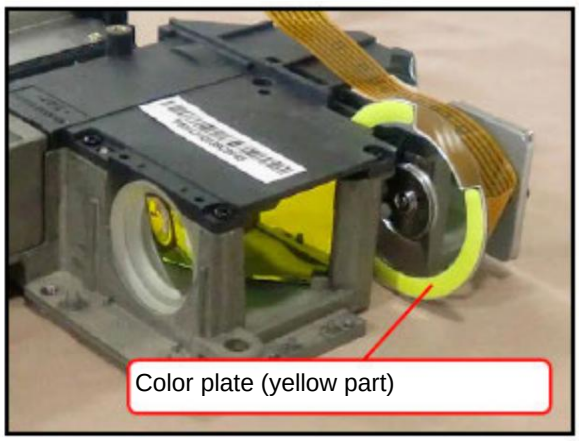




<ASSEMBLY NOTES: FW MODULE>

With the FW module aligned with the corner plate, follow the steps below to assemble the FW module. • Insert a feeler gauge (0.03 mm) between the wheel (color plate) and the frame. While pressing the FW module in the direction of the arrow, tighten the two screws (S9). **NOTE:** be careful not to damage the wheel. **NOTE:** Do not push the FW module too hard. This may make it impossible to remove the dipstick.





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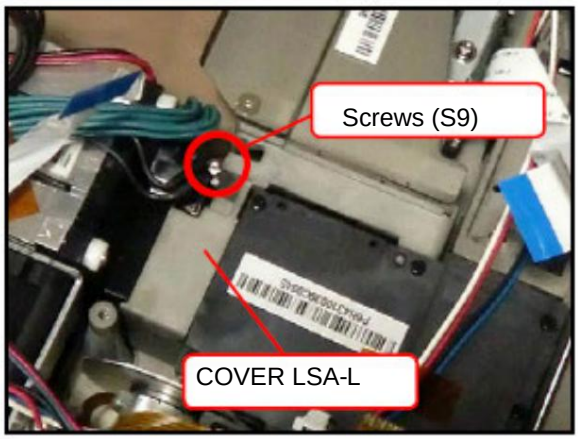
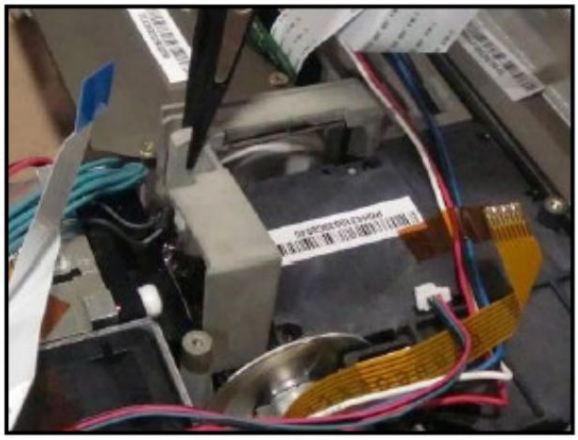
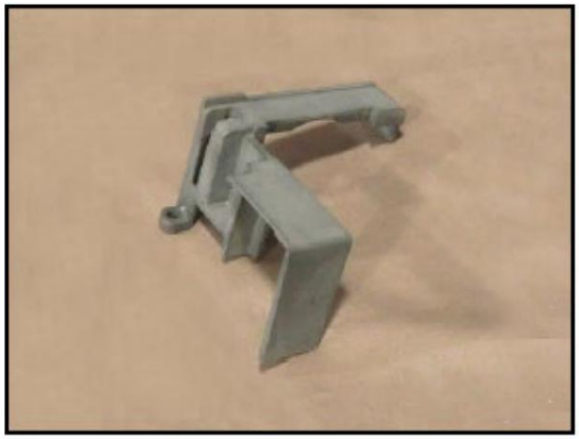
I. LSB MODULE (LED LIGHT SOURCE)

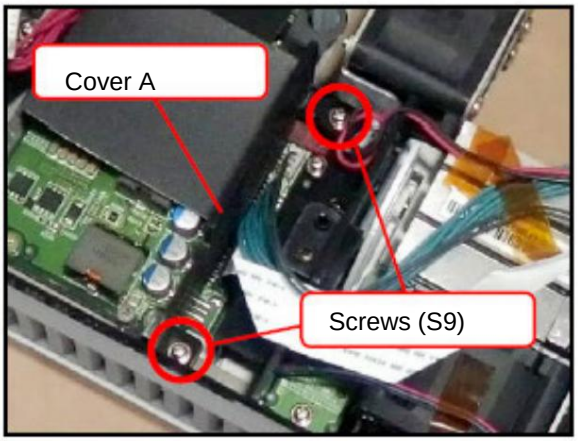
NOTE: Do not touch lens I-1. Unscrew
one screw (S9) and remove the LSA-L cover. **NOTE:** When
removing the LSA-L cover, make sure it does not come into contact with the components around it. **NOTE:** If the cover is difficult to remove,
use a tool such as tweezers.







I-2. Remove the power module.
NOTE: For more information, see "N. POWER MODULE".
I-3. Unscrew the two screws (S9) and remove cover A.



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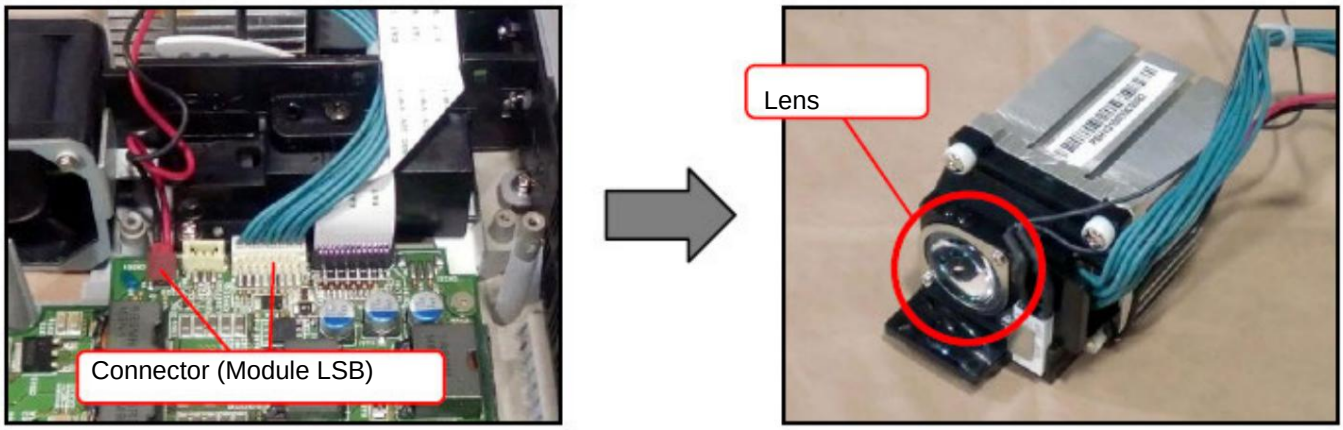
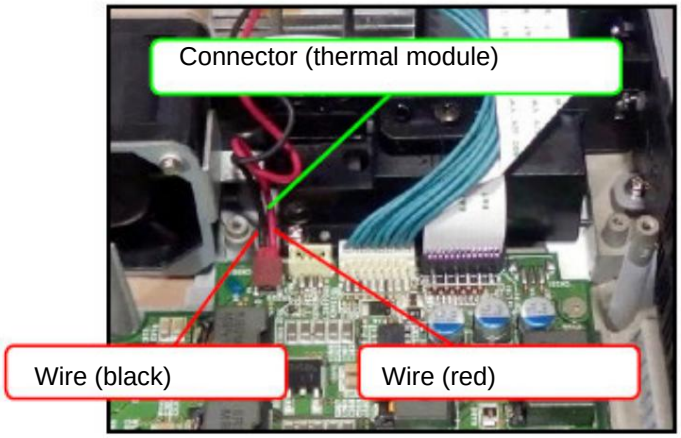
I-4. Disconnect the two connectors and remove the LSB module.



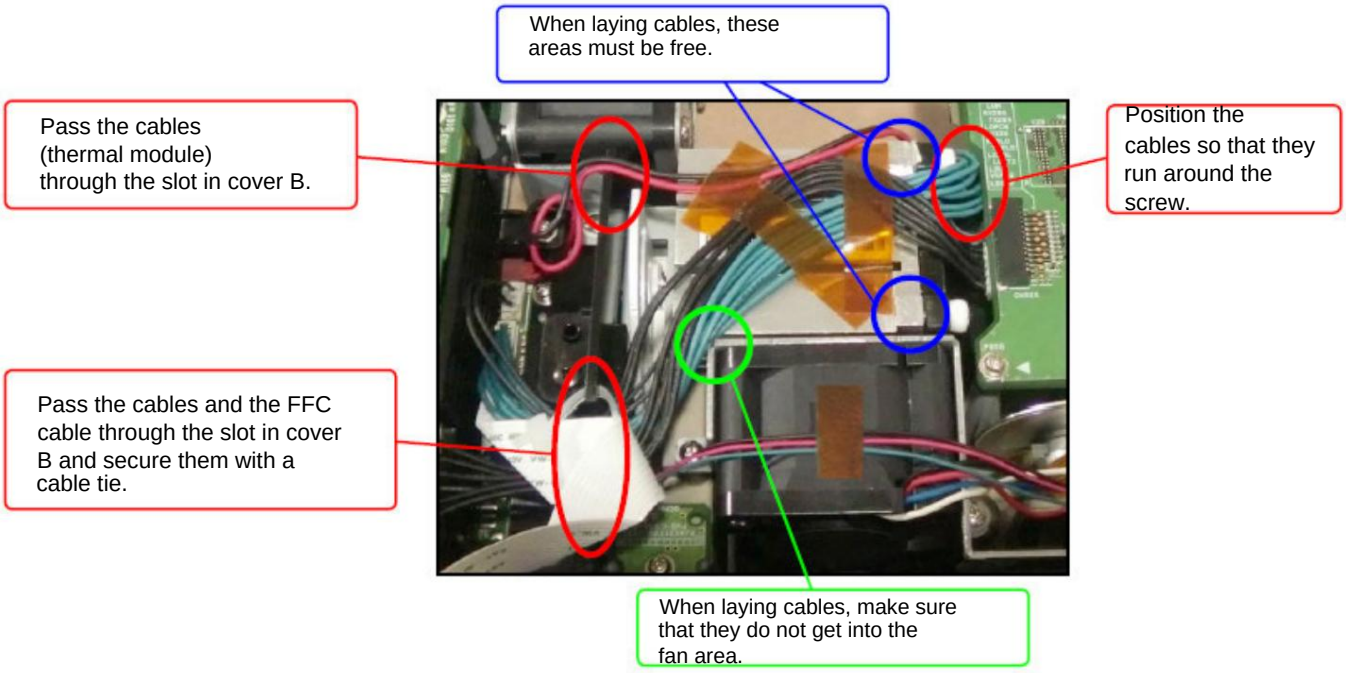
<ASSEMBLY NOTES: LSB MODULE>

• When attaching the connector of the LSB module (thermal module), make sure that it is oriented correctly.



When assembling the LSB module, arrange the cables carefully.

• Arrange the cables of the LSB module and the cables connected to the back of the PWB-1 board and fix them with tape in two places. After connecting the FFC cable, secure the cables with a cable tie. **NOTE:** Be careful not to run cables on the heatsink. • Arrange the cables of the LSB module (thermal module) and fix them with tape in one place. **NOTE:** Make sure the cables do not touch the side of the radiator.


When laying cables, these areas must be free.
Pass the cables (thermal module) through the slot in cover B.
Position the cables so that they run around the screw.
Pass the cables and the FFC cable through the slot in cover B and secure them with a cable tie.
When laying cables, make sure that they do not get into the fan area.

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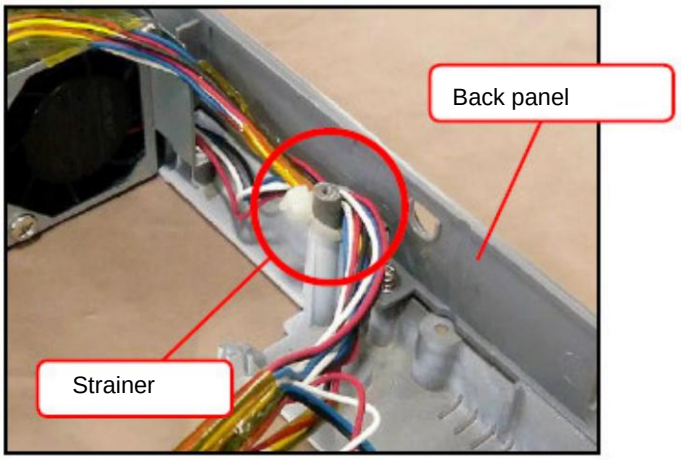
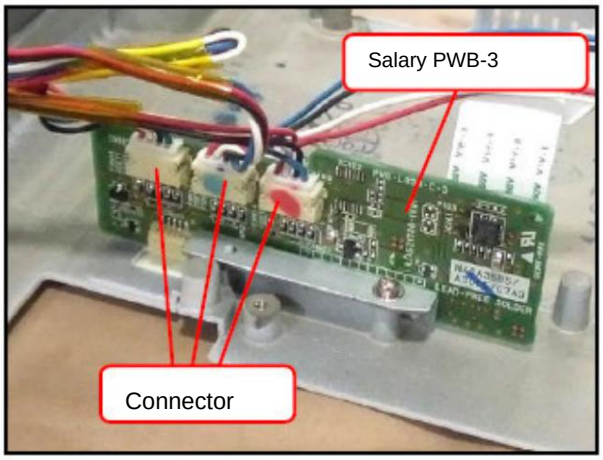
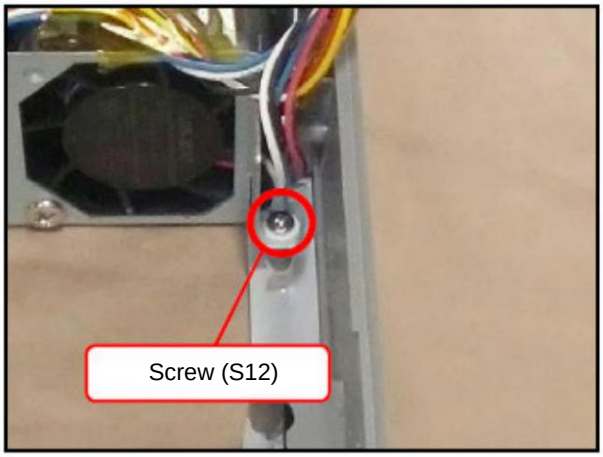
J. FAN MODULE A

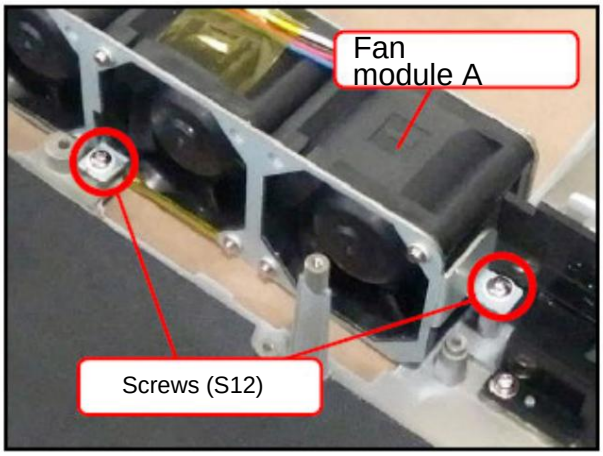
J-1. Remove the cable tie.
J-2. Disconnect the three connectors attached to the PWB-3 board.

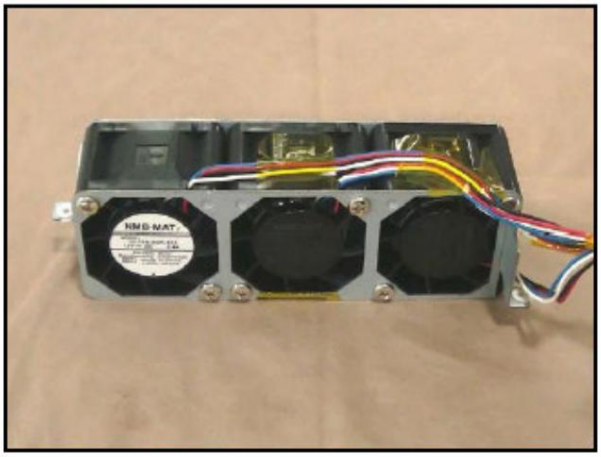


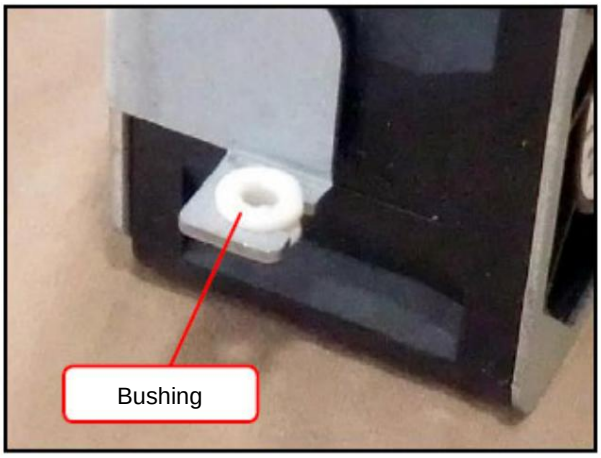


J-3. Remove three screws (S12) and remove fan A. **NOTE:** A bushing is installed in each hole. Do not interchange bushings.









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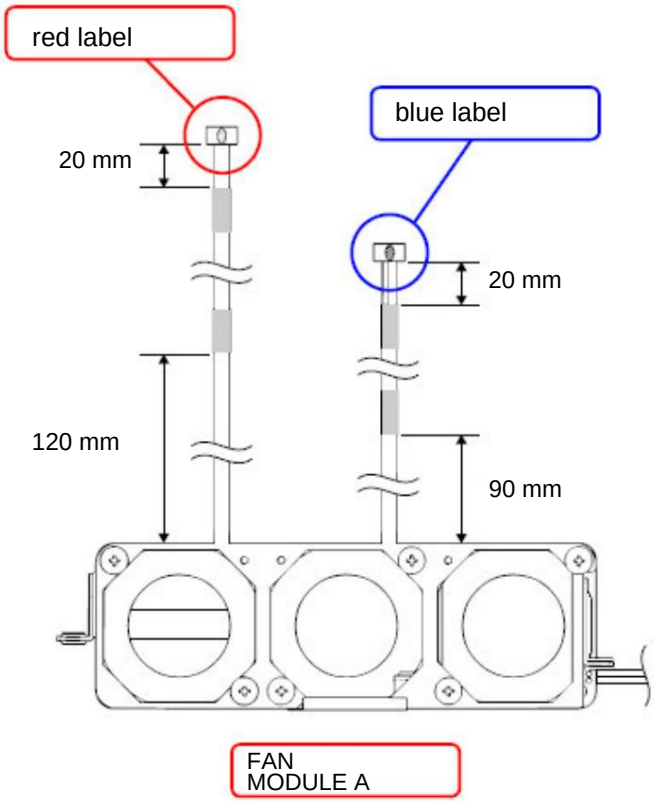
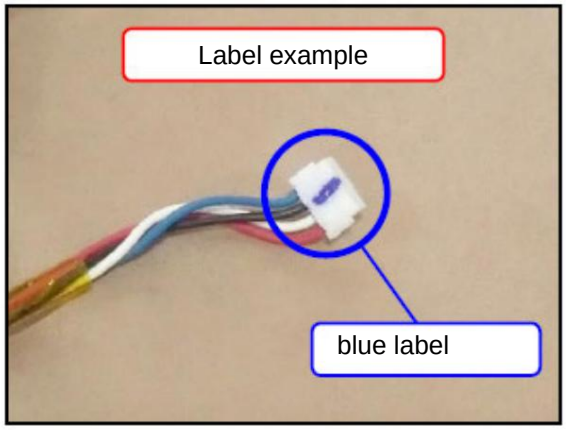
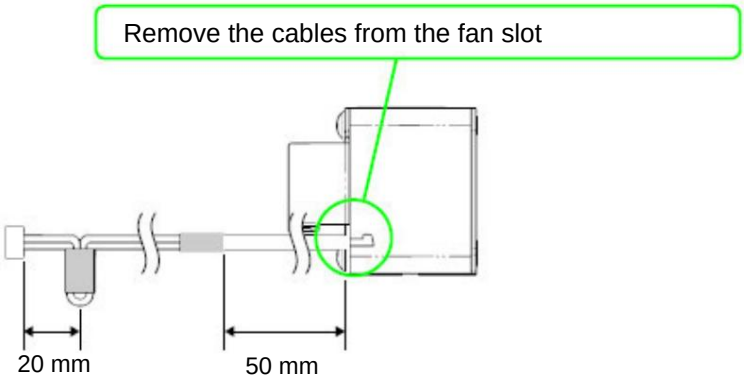
<CAUTIONS WHEN INSTALLING A NEW PART: FAN MODULE A> When replacing a component in fan module A with a new fan, proceed as follows: • Wrap the cables with tape to the length shown in the following figure. • When replacing a fan, make a mark with a colored marker on the connector.

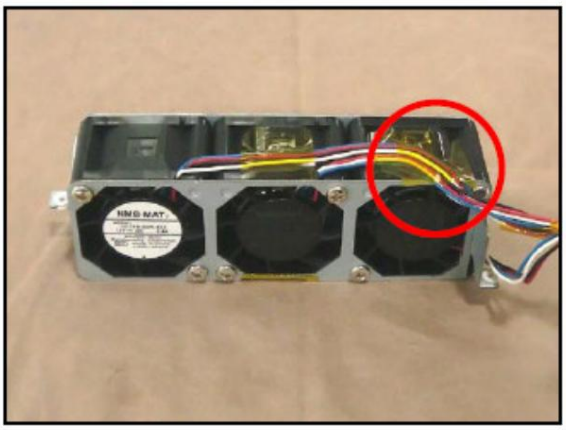
NOTE: When replacing the fan on the right side of the fan module, as shown in the figure, the tag is not required.

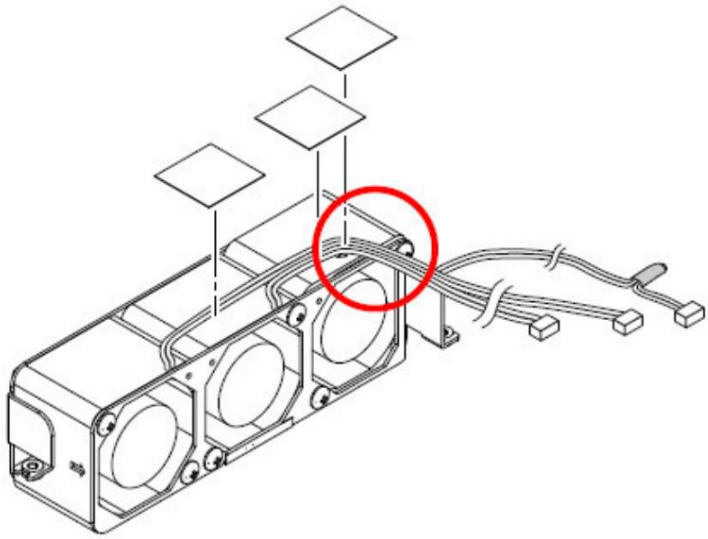






• When fixing the cables to the fan with tape, make sure that the cables do not overlap each other.





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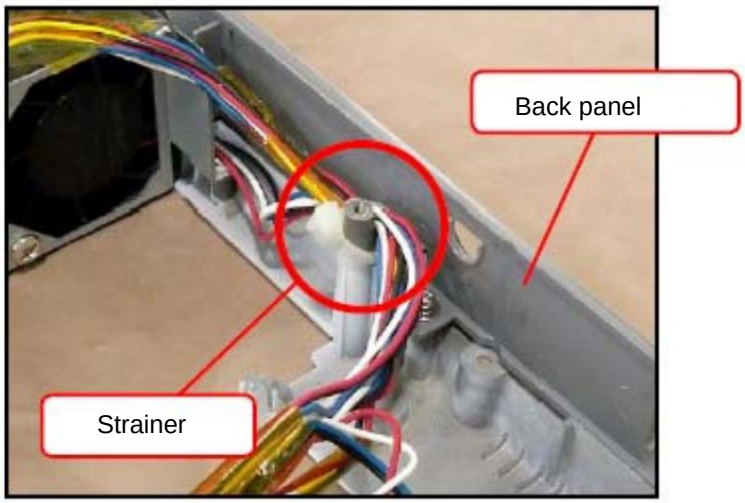
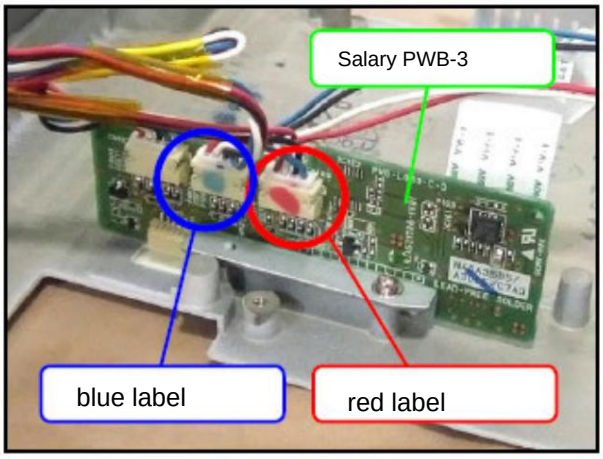
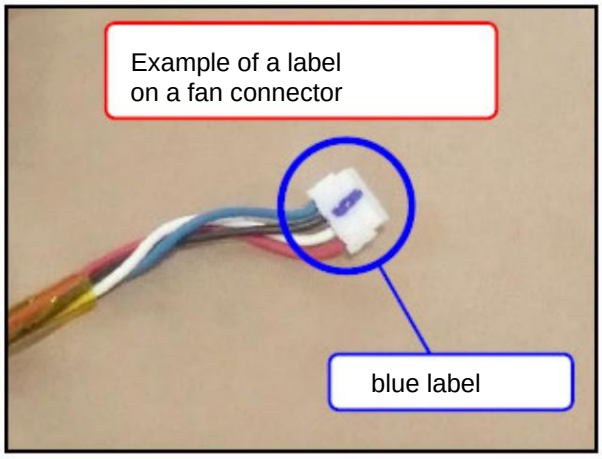
<ASSEMBLY NOTES: FAN MODULE A> • When assembling the fan module A, make sure that the cables are arranged as shown in the figure below, and fix the cables on the stop with a cable tie.

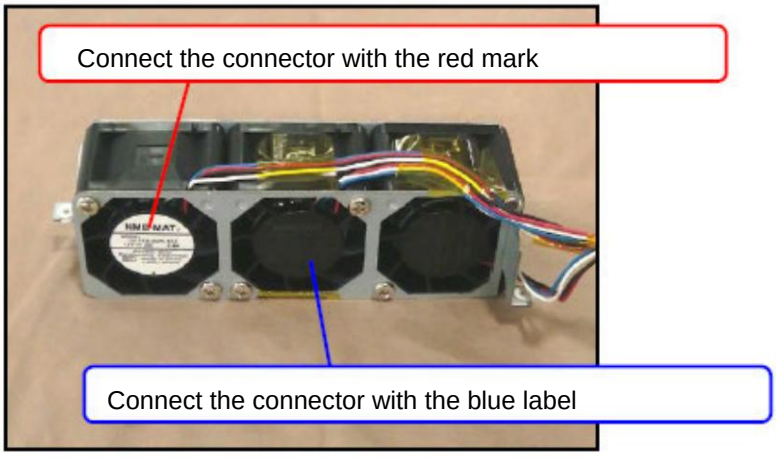


• When connecting connectors to the PWB-3 board, make sure that it is connected to the appropriate connector.

NOTE: There are color markings on the PWB-3 board and on the fan side. Connect the fan connectors and PWB-3 board connectors that have the same color.







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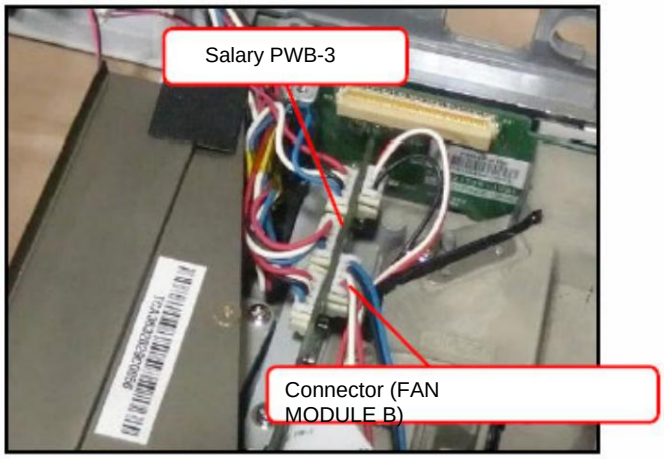
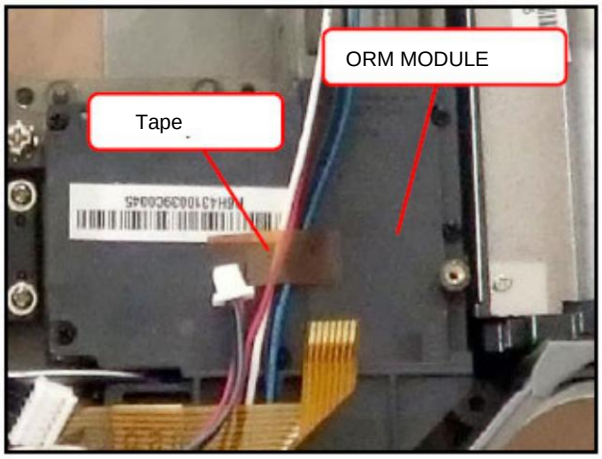
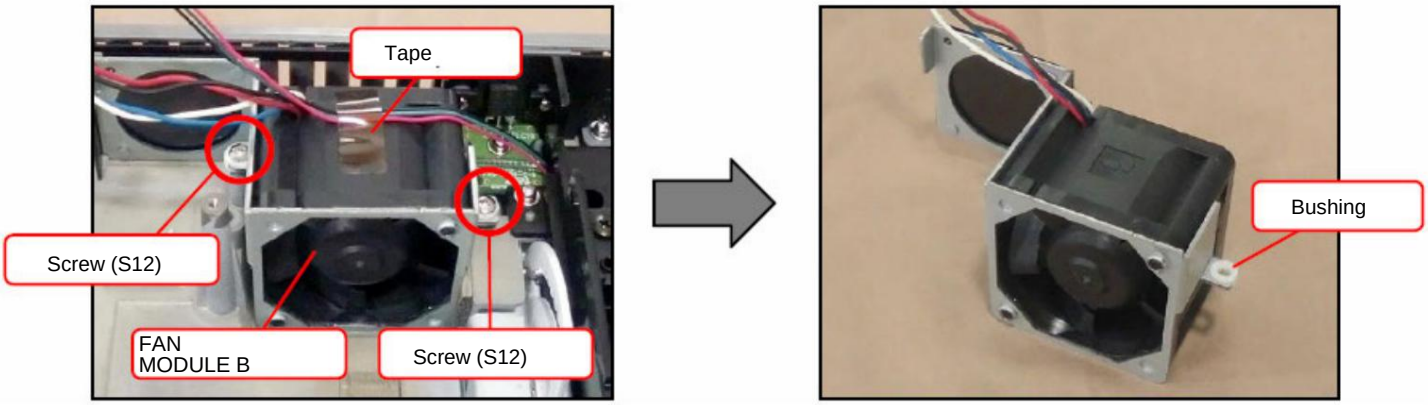
K. FAN MODULE IN K-1. Disconnect the
connector (FAN MODULE B) connected to the PWB-3 board. K-2. Remove the tape securing the fan module B cables.





K-3. Remove the tape.
K-4. Remove two screws (S12), then remove fan module B. **NOTE:** A bushing is installed in
each hole. Do not interchange bushings.



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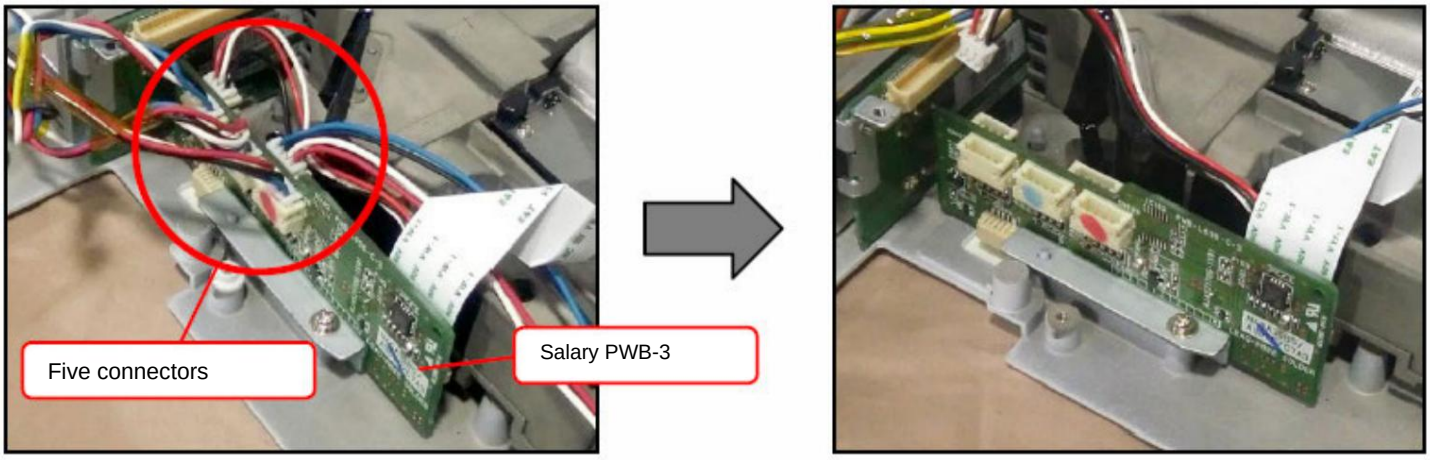
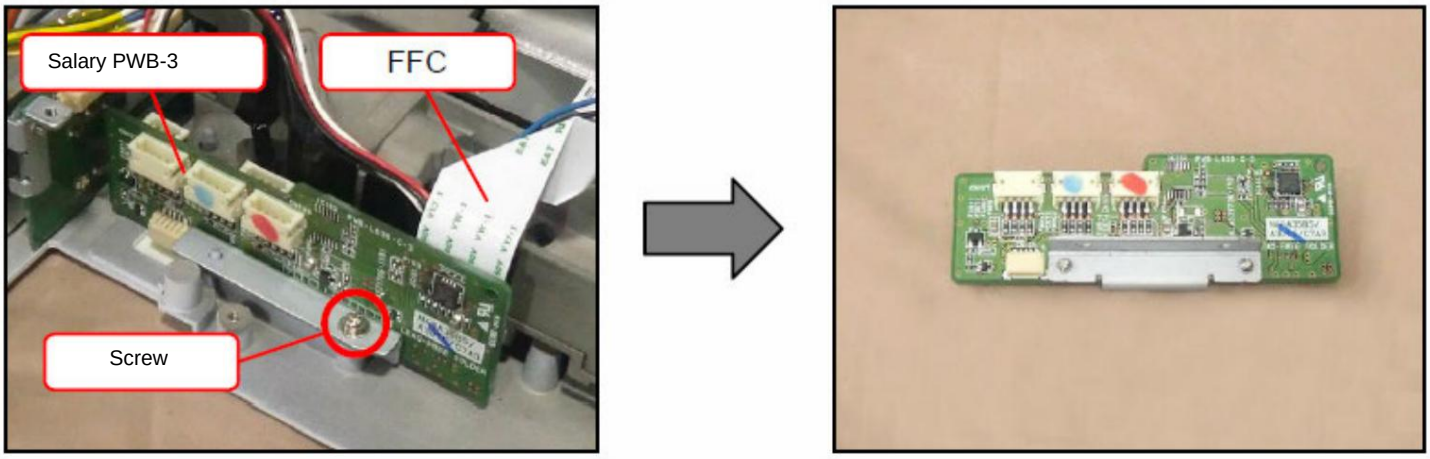
L. PWB-3 L-1. Disconnect connectors.



L-2. Unscrew one screw and remove the PWB-3 board.
L-3. Remove the FFC cable.



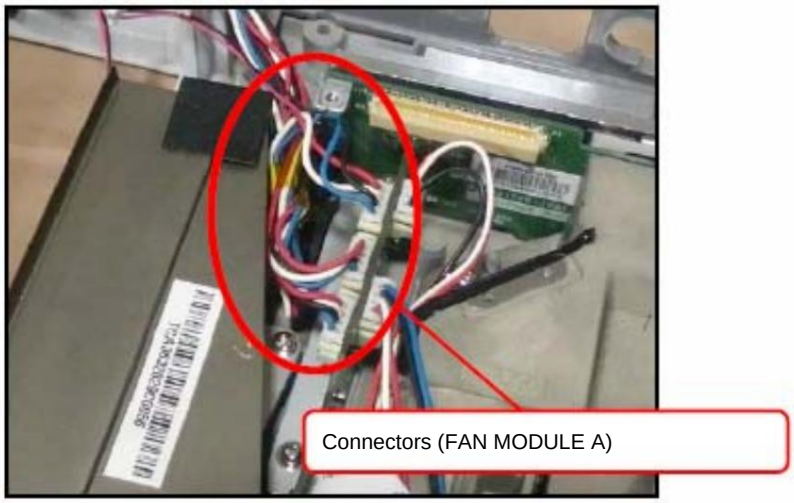
<ASSEMBLY NOTES: PWB-3 BOARD>

• Before assembling the PWB-3 board, connect the FFC cable. • When connecting the connectors (FAN MODULE B), make sure to connect the corresponding connector.

NOTE: For a more detailed description, see <ASSEMBLY NOTES>, subsection “J. FAN MODULE A".

• When assembling the PWB-3 board, make sure the cables are routed according to the following. pattern.

NOTE: run cables (FAN MODULE A) between PWB-3 board and LSA-M module.



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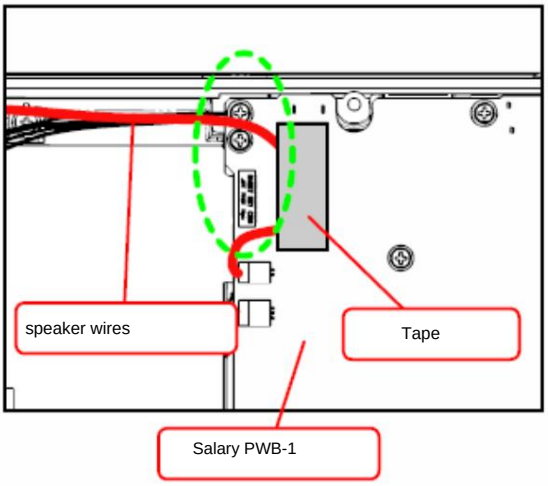
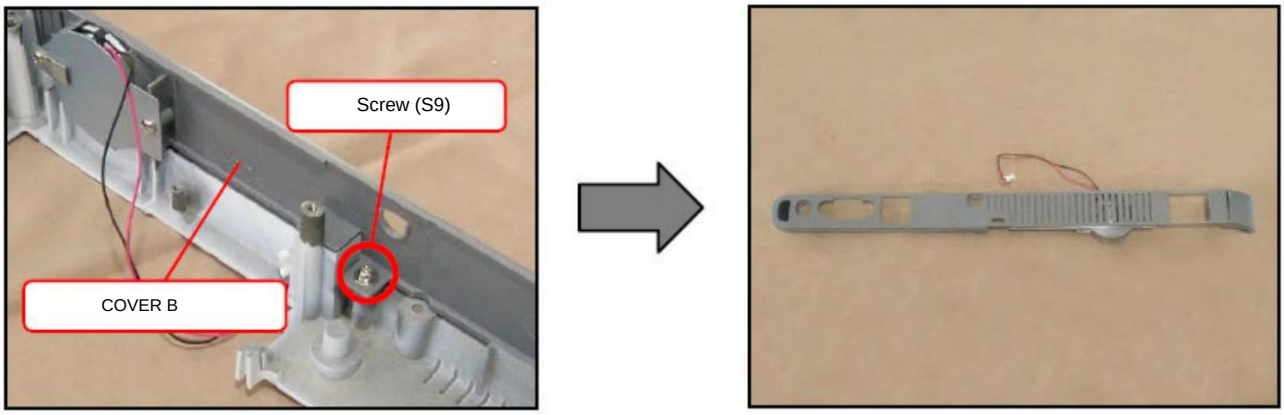
M. COVER IN M-1.

Remove the tape securing the speaker wires to the PWB-1 board. M-2. Disconnect the speaker wire connector.

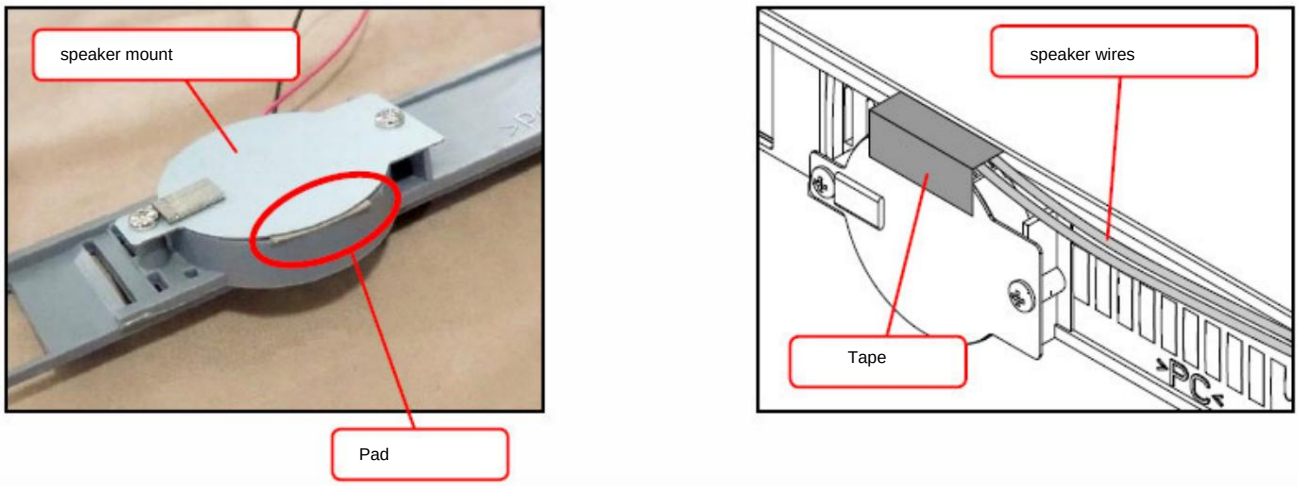


M-3. Loosen screw (S9) and remove cover B.



<CAUTIONS WHEN REPLACING WITH A NEW PART: COVER B> When replacing the components of cover B with new ones, please note the following:

- When assembling the speaker mount, be sure to install a speaker between the mount and the rear panel. pad.
- Secure the speaker wires with tape so that the tape does not touch the speaker.



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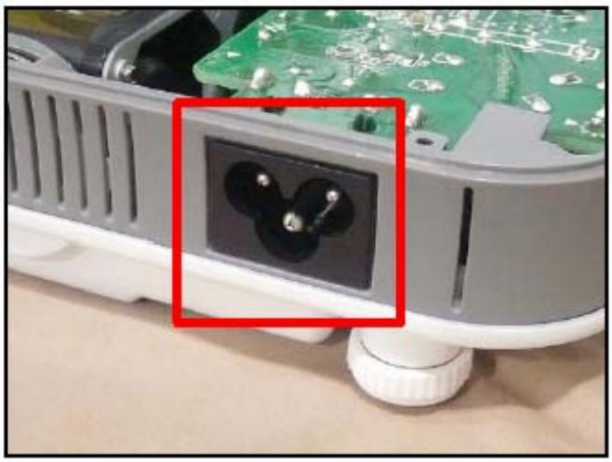
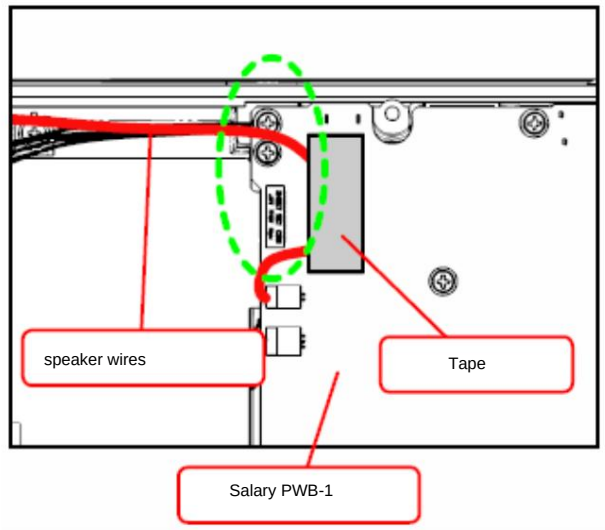
<ASSEMBLY NOTES: COVER B>

• Securely fasten the rear panel and power cable entry.



• Route the speaker wires as shown in the figure below.

NOTE: When routing the speaker wires, keep the screws and connector away from the wires and secure the wires in place with tape.



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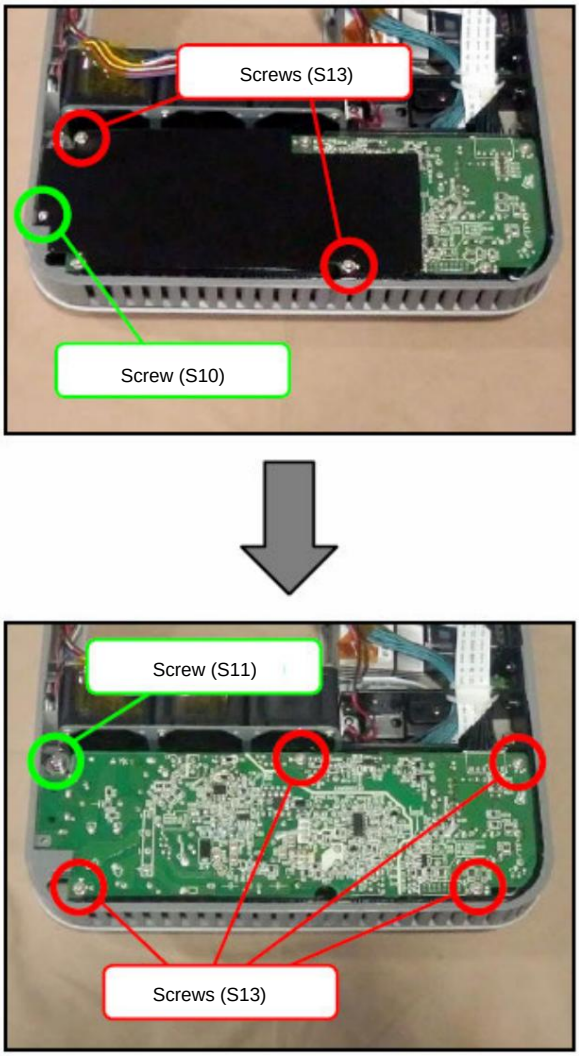
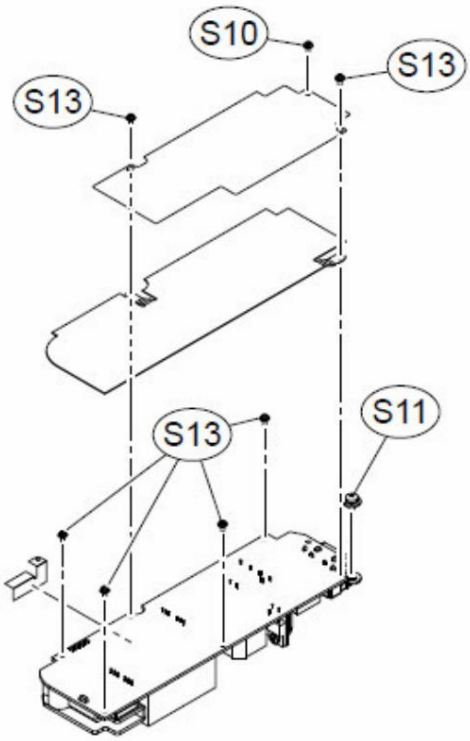
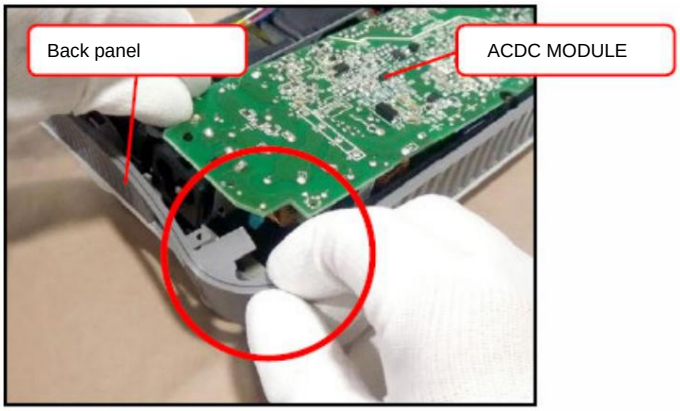
N. ACDC MODULE (POWER SUPPLY)

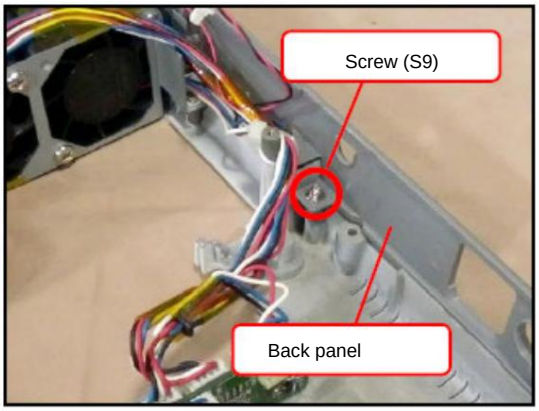
N-1. Unscrew the three screws (S10, S13) and remove the two insulating plates.
N-2. Unscrew five screws (S11, S13).





N-3. With the rear panel open, lift the ACDC module.
NOTE: If the module is difficult to remove, loosen the screw securing the rear panel or remove the cover B. For more details, see M. COVER B". To loosen the screw or remove cover B, you
must first remove the PWB-1 board. For a more detailed description, see "D. PWB-1 BOARD".





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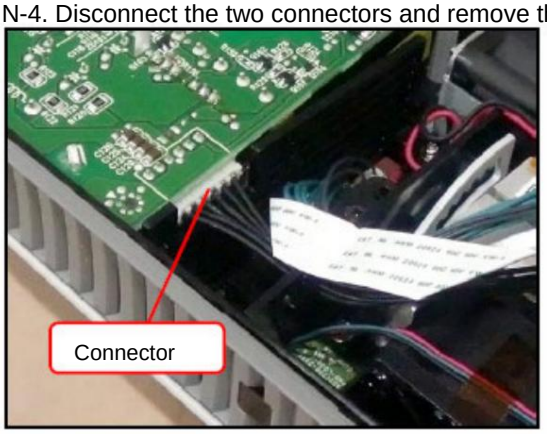
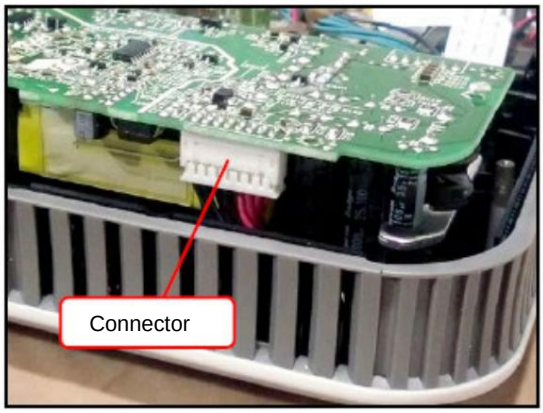
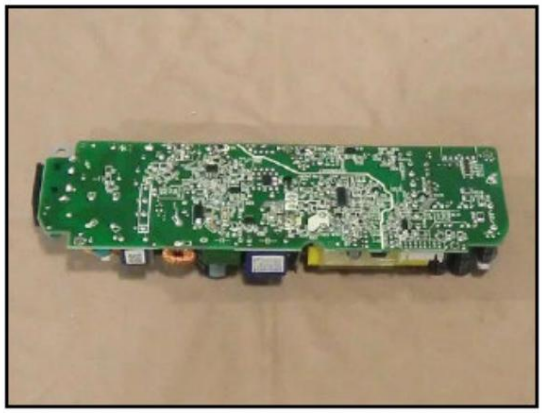
N-4. Disconnect the two connectors and remove the ACDC module.

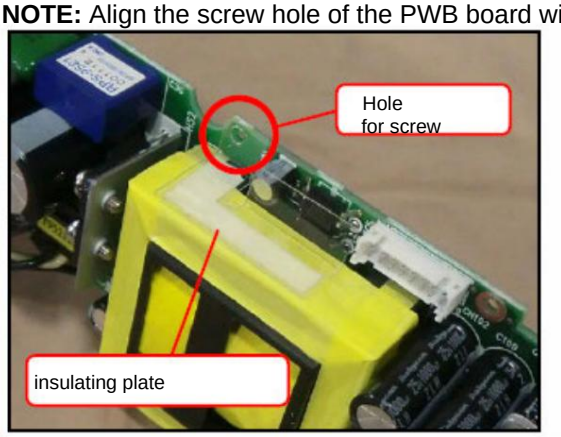


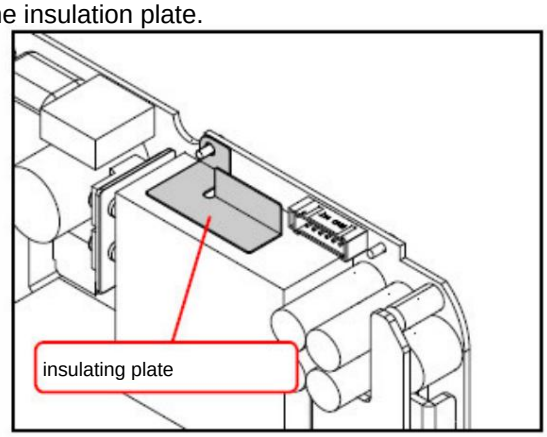




<CAUTIONS WHEN REPLACING WITH A NEW PART: ACDC MODULE> • When replacing the components of the ACDC module with a new one, make sure that the insulating plate installed.

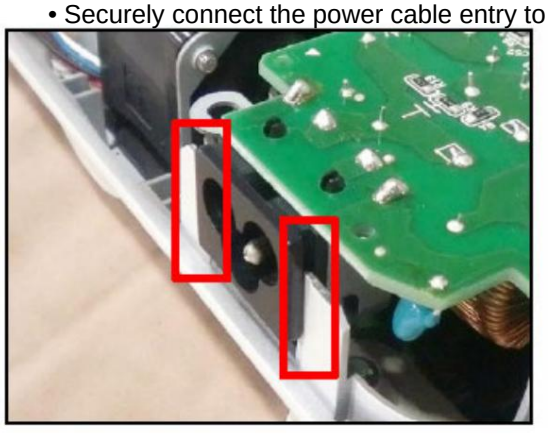
NOTE: Align the screw hole of the PWB board with the hole in the insulation plate.

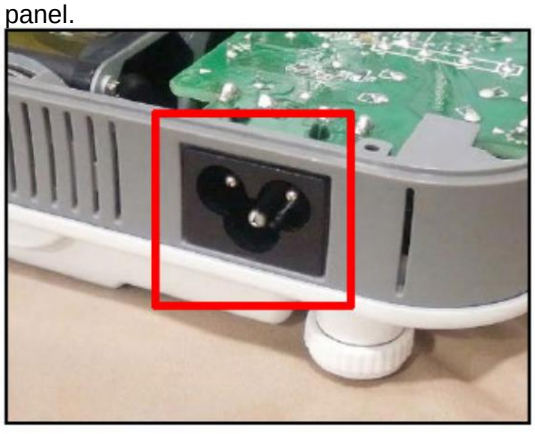




<ASSEMBLY NOTES: ACDC MODULE>

• Securely connect the power cable entry to the chassis and panel.





• Tighten the screws securing the rear panel if they were loosened during disassembly of the ACDC module.

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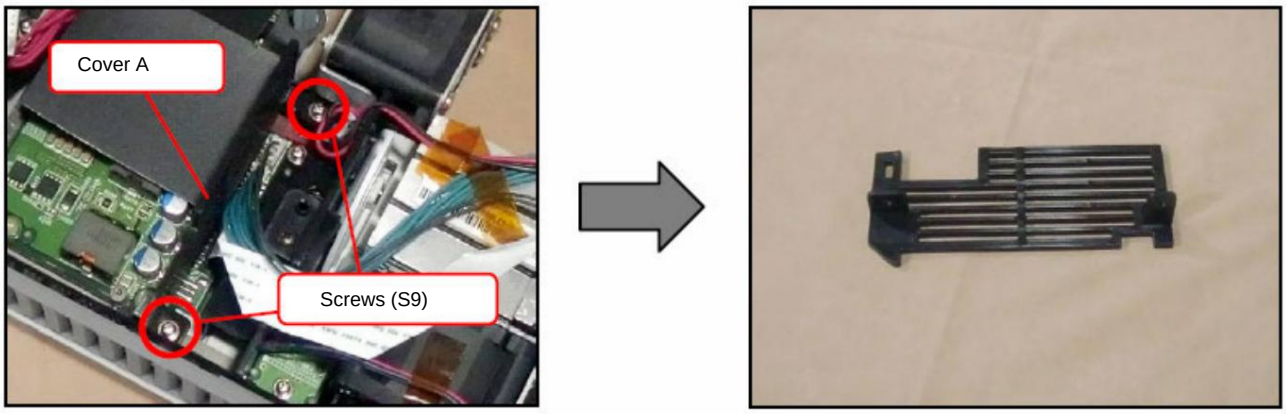
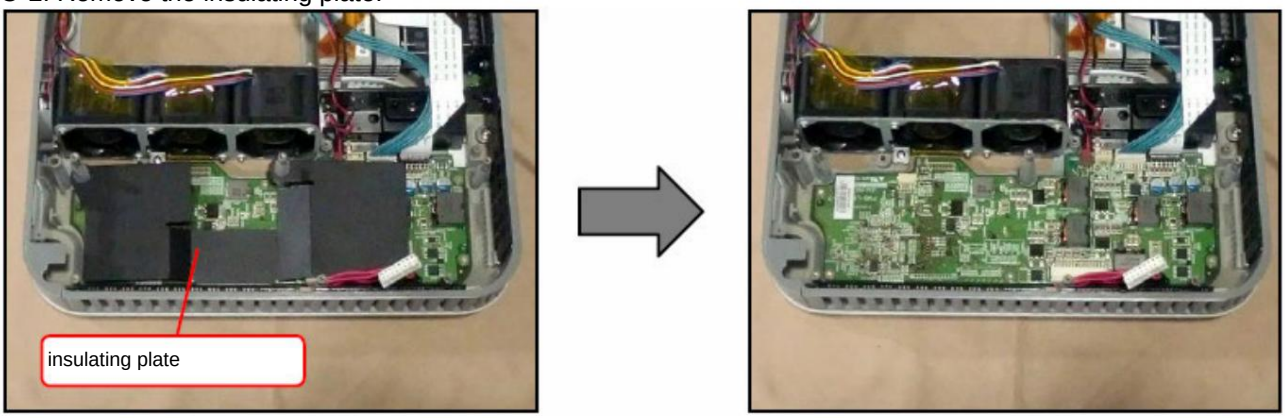
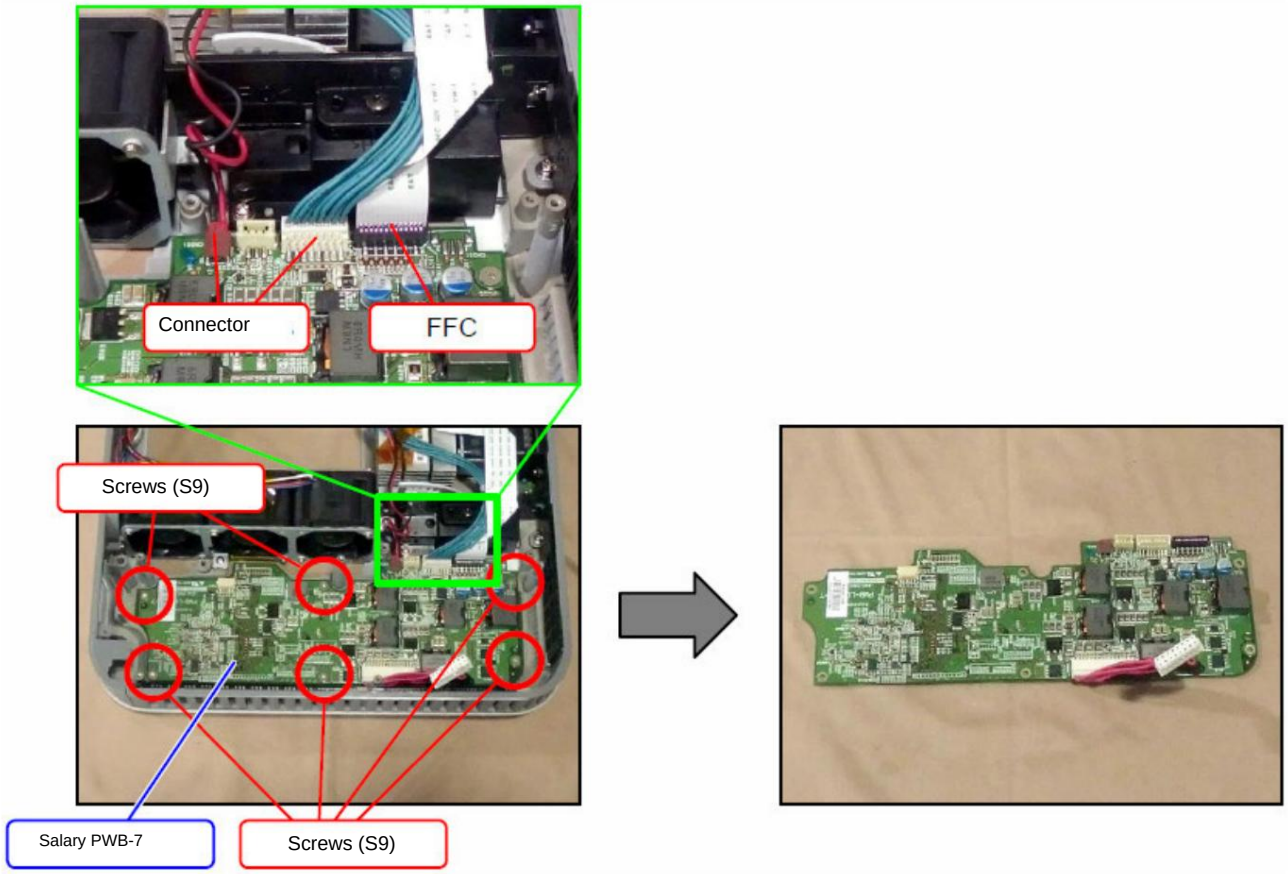
O. PWB-7 BOARD (LASER INITIATION BOARD) O-1. Loosen the two screws and remove cover A.



O-2. Remove the insulating plate.



O-3. Disconnect the two connectors and the FFC cable. O-4. Remove six screws (S8) and remove the PWB-7 board.



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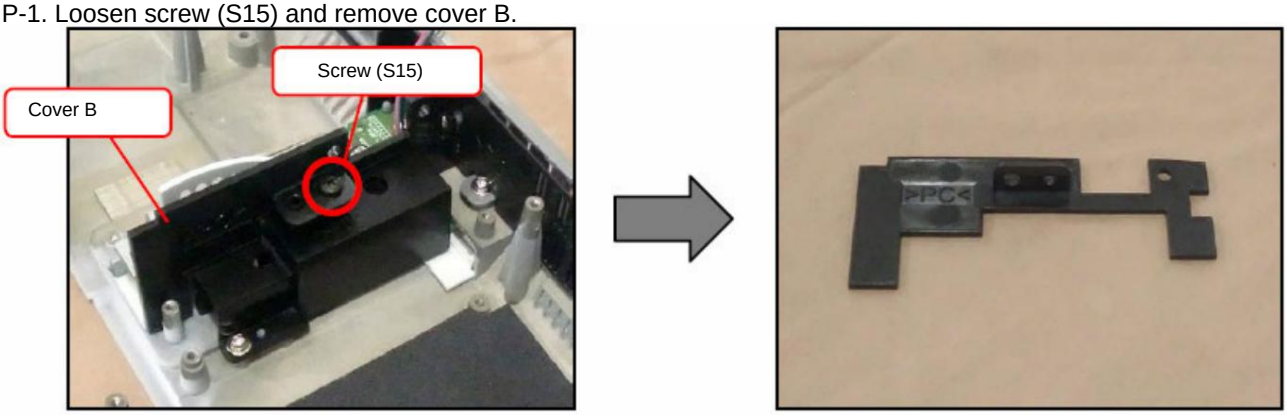
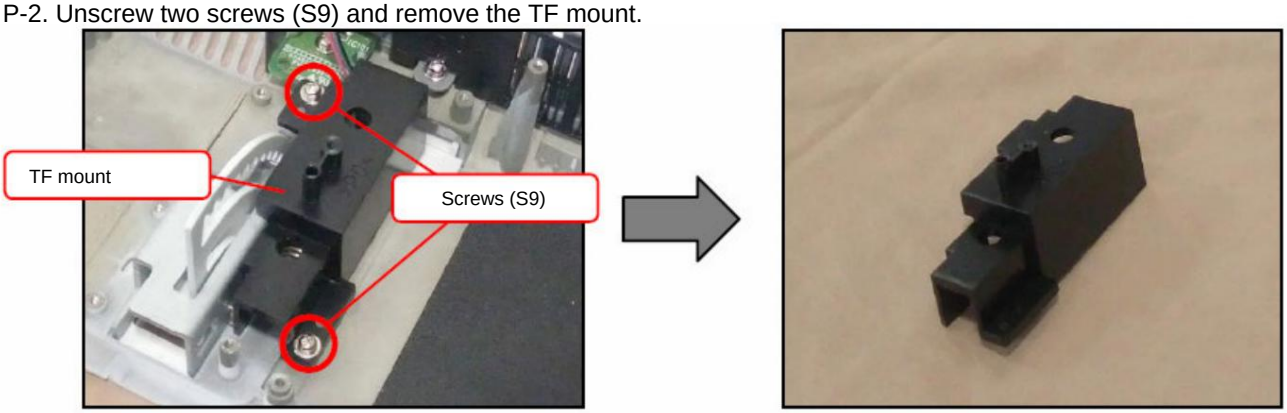
P. TF BUTTON

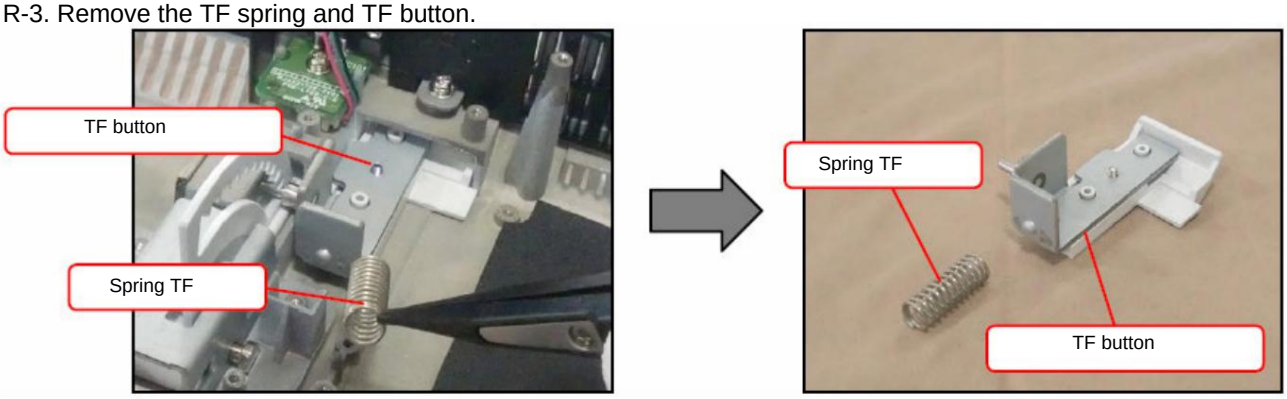
P-1. Loosen screw (S15) and remove cover B.



P-2. Unscrew two screws (S9) and remove the TF mount.



R-3. Remove the TF spring and TF button.



<ASSEMBLY NOTES: TF BUTTON>

• Before assembling the TF button, assemble the TF cover. • After assembling the TF cover, make sure that the angle can be continuously adjusted.

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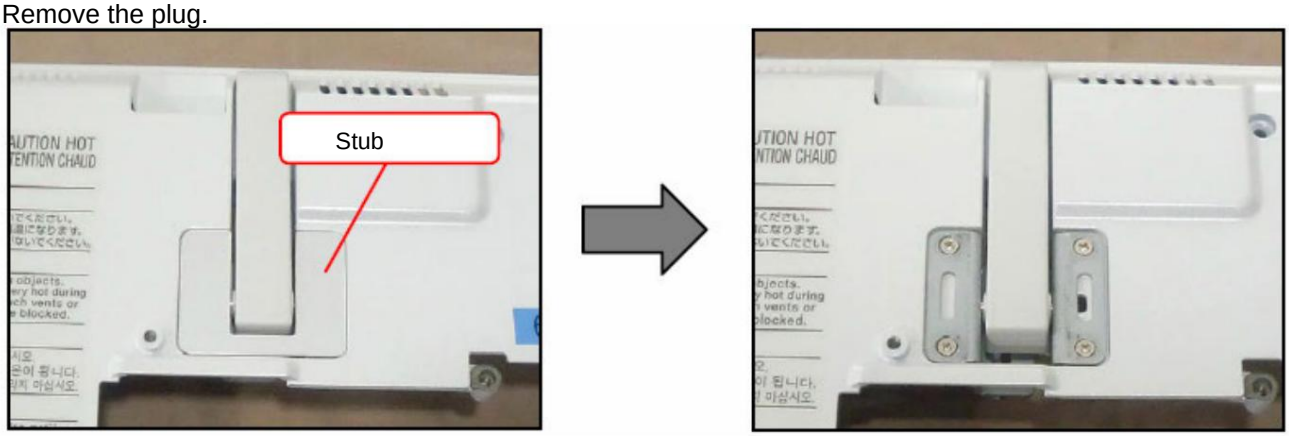
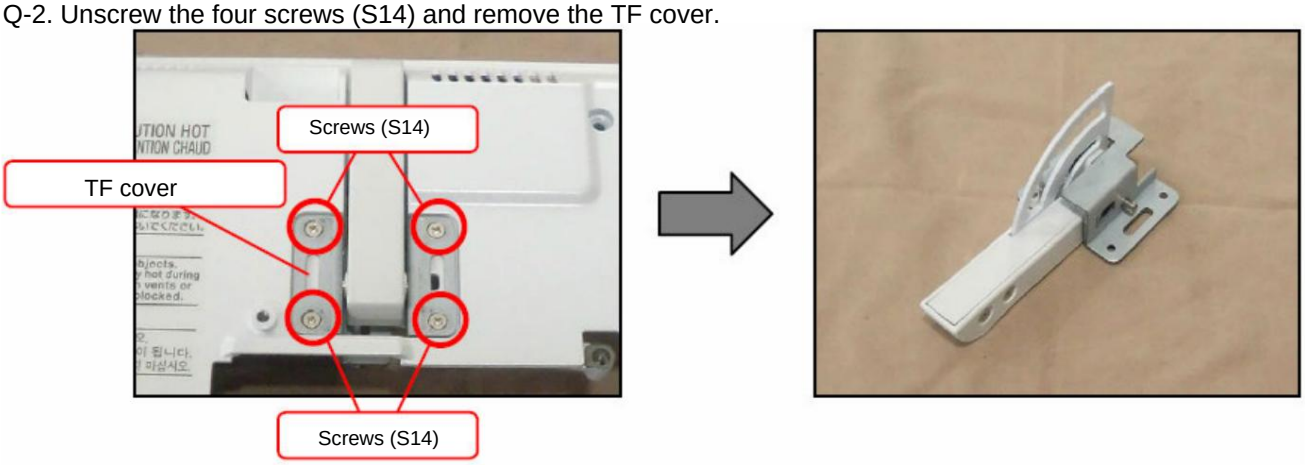
Q. TF COVER Q-1.

Remove the plug.



Q-2. Unscrew the four screws (S14) and remove the TF cover.



<ASSEMBLY NOTES: TF COVER>

- If the plug is visibly damaged or difficult to fit onto the plate, use a new plug, reuse of the old plug is prohibited.

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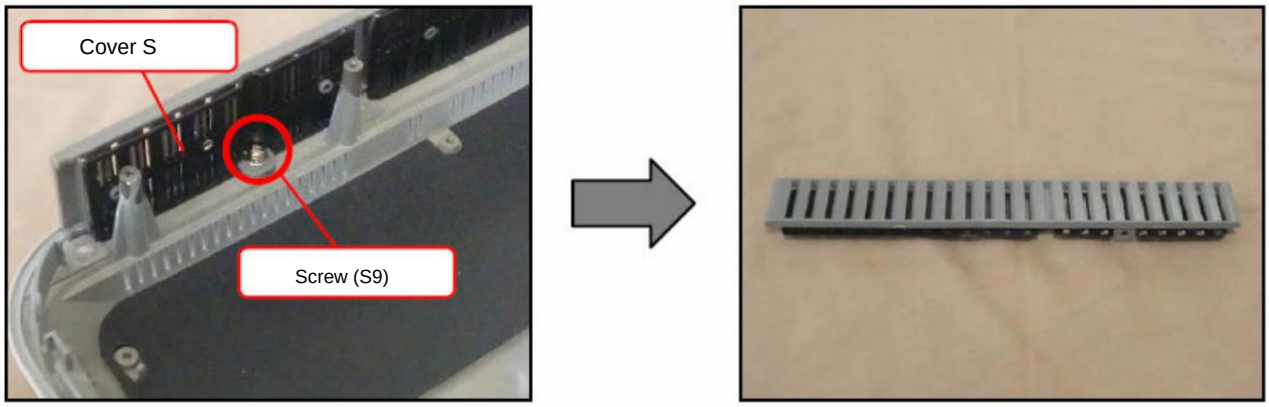
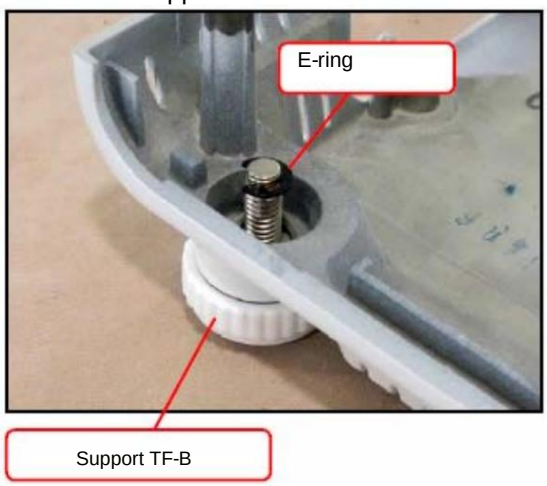
R. COVER S

R-1. Loosen the screw and remove cover S.



S. SUPPORT TF-B

S-1. Remove the E-ring.
S-2. Rotate support TF-B to remove it.



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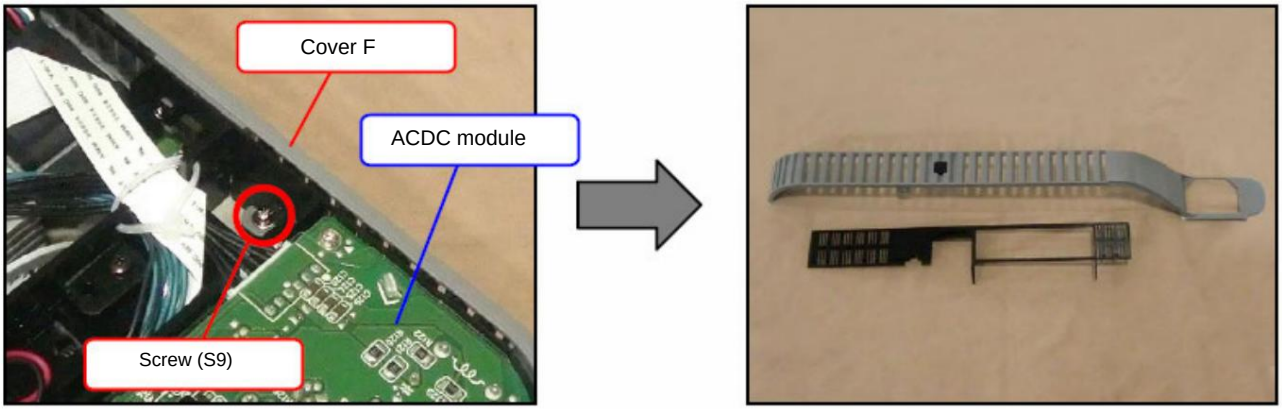
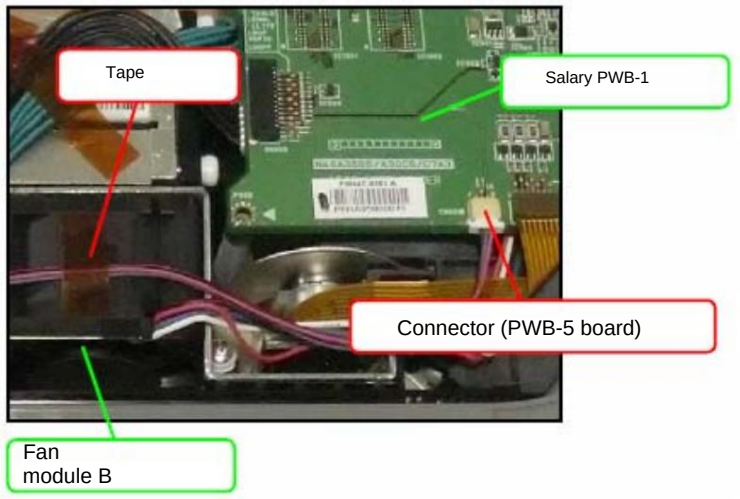
T. COVER F

T-1. Unscrew screw (S9) and remove cover F.

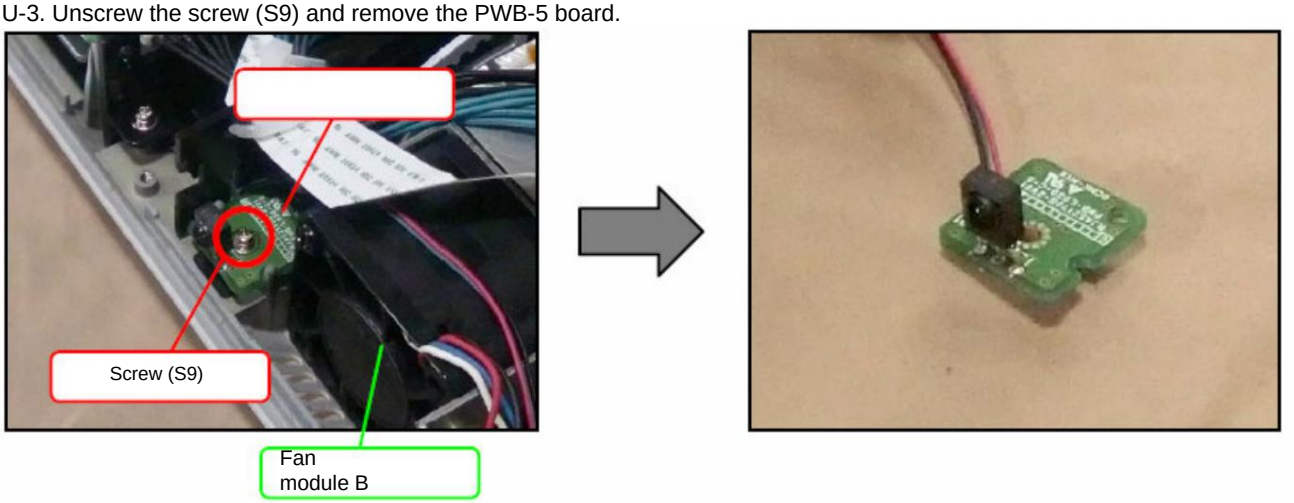


U. PWB-5 BOARD (IR SENSOR BOARD)

U-1. Disconnect the connector (PWB-5 board) connected to the PWB-1 board.
U-2. Remove the tape securing the cables (PWB-5 board) to fan module B.



U-3. Unscrew the screw (S9) and remove the PWB-5 board.



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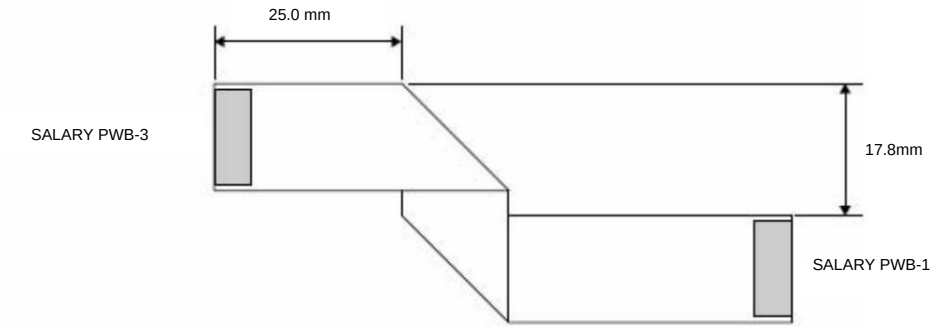
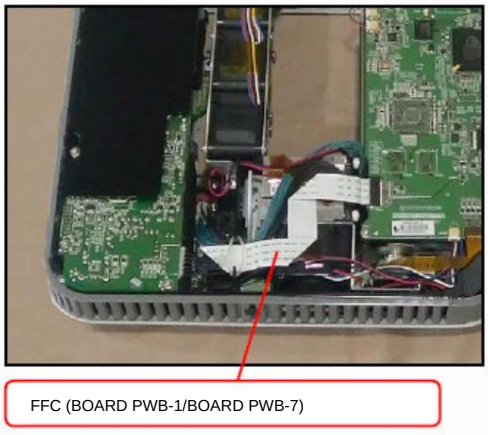
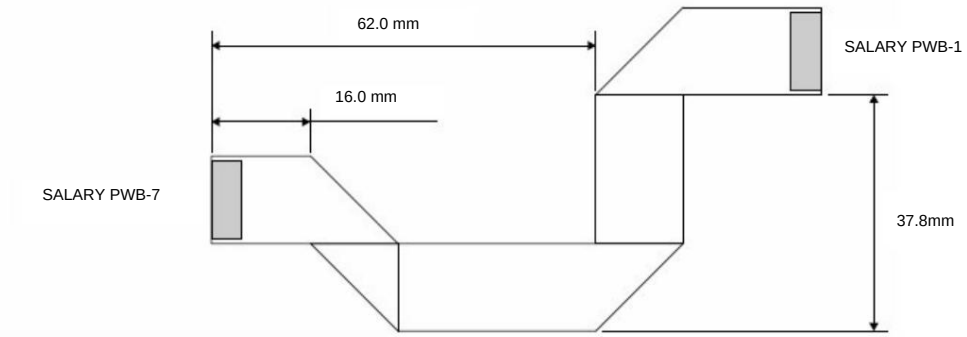
V. PRECAUTIONS WHEN REPLACING THE FFC CABLE

V-1. When replacing the FFC cable (PWB-1 BOARD/PWB-3 BOARD) with a new one, bend it to the shape according to the size shown in the following figure.



V-2. When replacing the FFC cable (PWB-1 BOARD/PWB-7 BOARD) with a new one, bend it to the shape according to the size shown in the following figure.





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8. DIAGNOSTICS PROGRAM

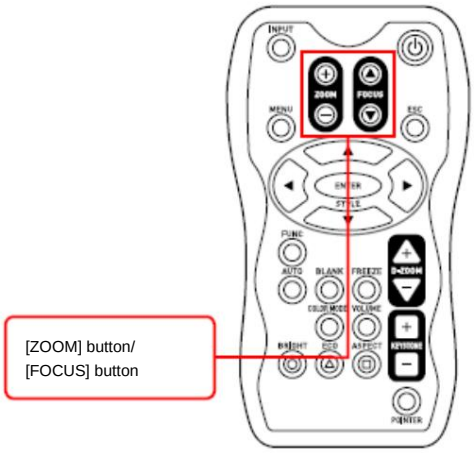
8-1. Starting procedure (1)
Connect the power cable to the projector and wait for the [POWER] LED to turn yellow. (2) Press the [(POWER] button on the
remote control or on the projector to turn on
his.
(3) Follow the steps below to run the diagnostic program.
Step 1. Press the [ENTER] and [ ] buttons simultaneously.
Step 2 After pressing the buttons as described in step 1, press and hold the [INPUT] button for 2 seconds. (a total of 3 buttons must be held down).
Step 3 Release all buttons except the [INPUT] button.
(4) The diagnostic program menu will appear.

The model is specified with the development code.
LY042: XJ-A240 LY043: XJ-A245

8-2. Procedure •
Use the cursor buttons to select the item to be diagnosed, then press the [ENTER] button. to confirm the selection, and run diagnostics. • To return to the previous menu level, press the [ESC] button. • To exit the diagnostic program, move the cursor to "Diag Exit [ENTER]" and press the button [ENTER].

NOTE: While the diagnostic program is running, the [ZOOM] and [FOCUS] buttons on the main unit are inactive. To change the image size or focus, use the [ZOOM] and [FOCUS] buttons on the remote control, which remain

active.



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8-3. About Diagnostics

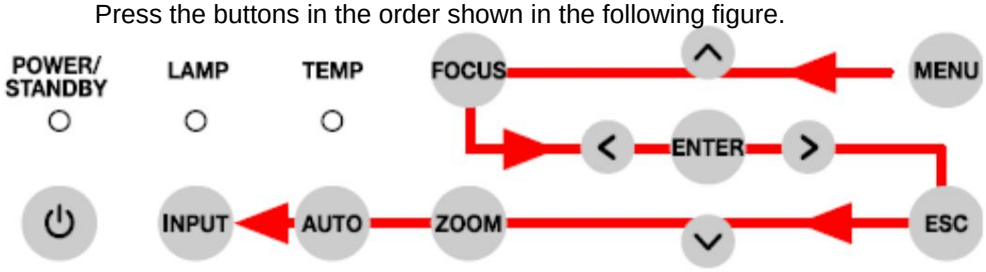
Diagnostics is performed for the following functions. It is forbidden to perform other types of diagnostics, this may lead to a change in the settings.

• Auto-SALL2 (button test, zoom test, memory test) • ROM test • HDMI test

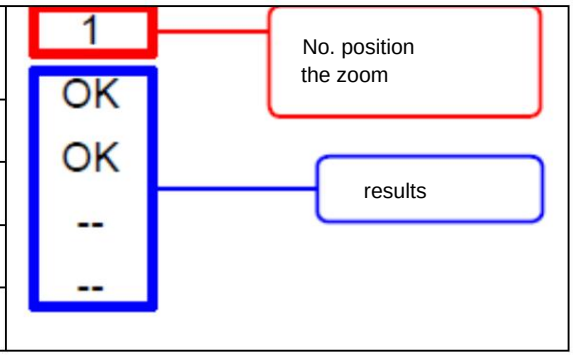
8-3-1. Auto-SALL2

NOTE: To abort the diagnostic process, press the [ESC] key. (1) From the main menu, select "Factory Items" ÿ "Auto-SALL2". (2) Test buttons

Press the buttons in the order shown in the following figure.



If the buttons are pressed in the wrong order, or if a button fails, an audible signal will sound. After pressing the [INPUT] button, a double beep will sound at the end and zoom diagnostics will begin. (3) Zoom Diagnosis When the window below appears, press
the [ZOOM] button on the remote
control. **NOTE:** If the remote control is not available, press the [INPUT] button. The diagnostic will skip the zoom test and move on to the next step. (In this case, the result of the zoom test will be “NG (fail)”) Check all zoom positions (0-3) and check the diagnostic results. When you change the screen size, the zoom position number also changes, then the diagnostic results are displayed.

Zoom Position	[ZoomUp]/[ZoomDown] [Zoom Up] / [Zoom Down]	
Check Zoom Position 0		
Check Zoom Position 1		
Check Zoom Position 2		
Check Zoom Position 3		

After checking the results and pressing the [INPUT] button, the memory test will start and the test results will be displayed.

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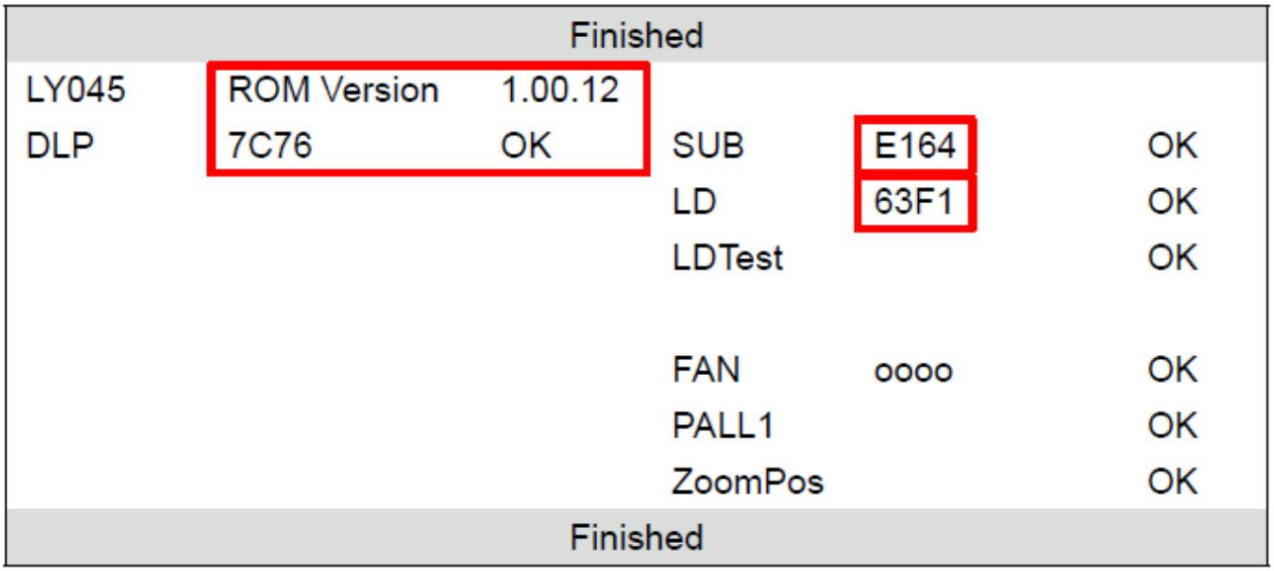
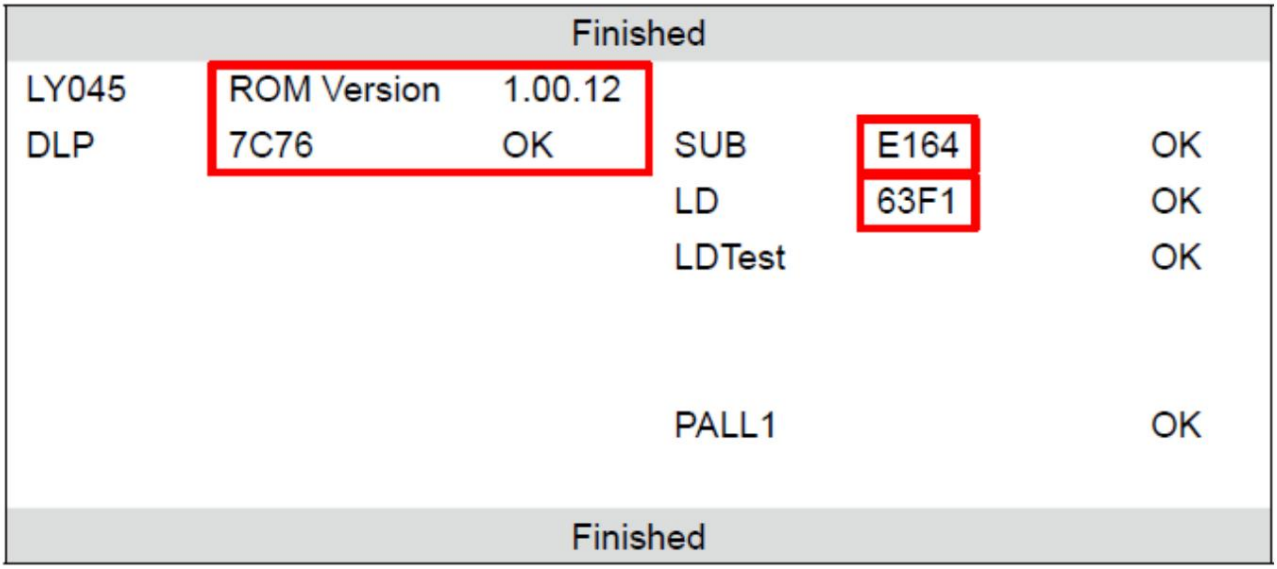
(4) Memory test and result display The memory test
is performed automatically. When the memory test is completed, the results of the test are displayed. Check diagnostic results and control values of ROM (DLP, SUB, LD). NOTE: If the zoom test was omitted, the result
of the zoom position test (ZoomPos) will be "NG (fail)". After confirming the value, press the [ESC] button to return to the menu screen.



8-3-2. ROM Check (1)
From the main menu, select "Function Test" ÿ "ROM CHECK". The memory test is performed automatically, then the results
of the test are displayed. Check ROM control values (DLP, SUB, LD). After confirming the value, press the [ESC] button to return to the screen
menu.



8-3-3. HDMI Check
The HDMI function is not checked or confirmed by the diagnostic program. Connect HDMI compatible equipment to the projector and check if the image is projected.

HDMI-enabled equipment: High-Definition
Multimedia Interface (HDMI) playback equipment or PC using a DVI-HDMI conversion cable.

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8-4. Lamp/Device Hours and Error Codes (Information Menu)

8-4-1. Entering the diagnostic program

(1) Connect the power cable to the projector and wait for the [POWER] LED to turn yellow. (2) Press the [(POWER] button on the

remote control or on the projector to turn on

his.

(3) Follow the steps below to run the diagnostic program.

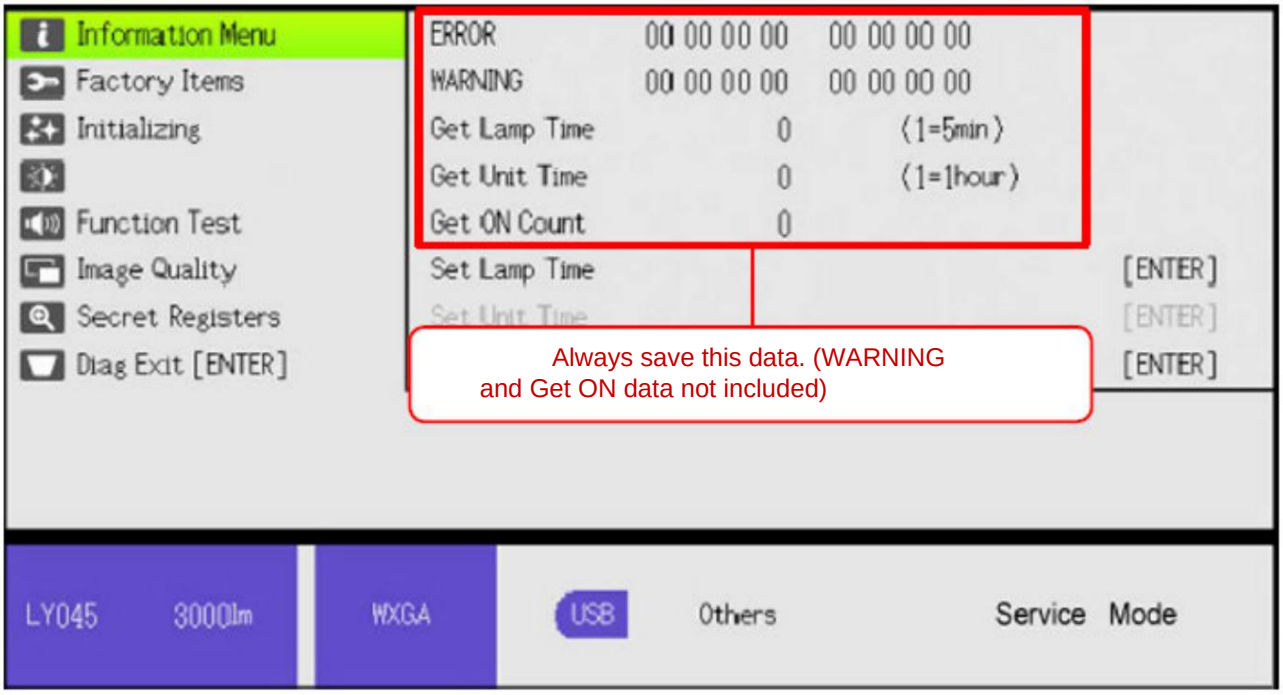
Step 1. Press the [ENTER] and [ ] buttons simultaneously.

Step 2 After pressing the buttons as described in step 1, press and hold the [INPUT] button for 2 seconds. (a total of 3 buttons must be held down).

Step 3 Release all buttons except the [INPUT] button.

(4) The diagnostic program menu will appear.

8-4-2. Viewing Lamp/Device Hours and Error Codes



ERROR	Error code number.
Get Lamp Time	Lamp duration. The duration of
Get Unit Time	the device.

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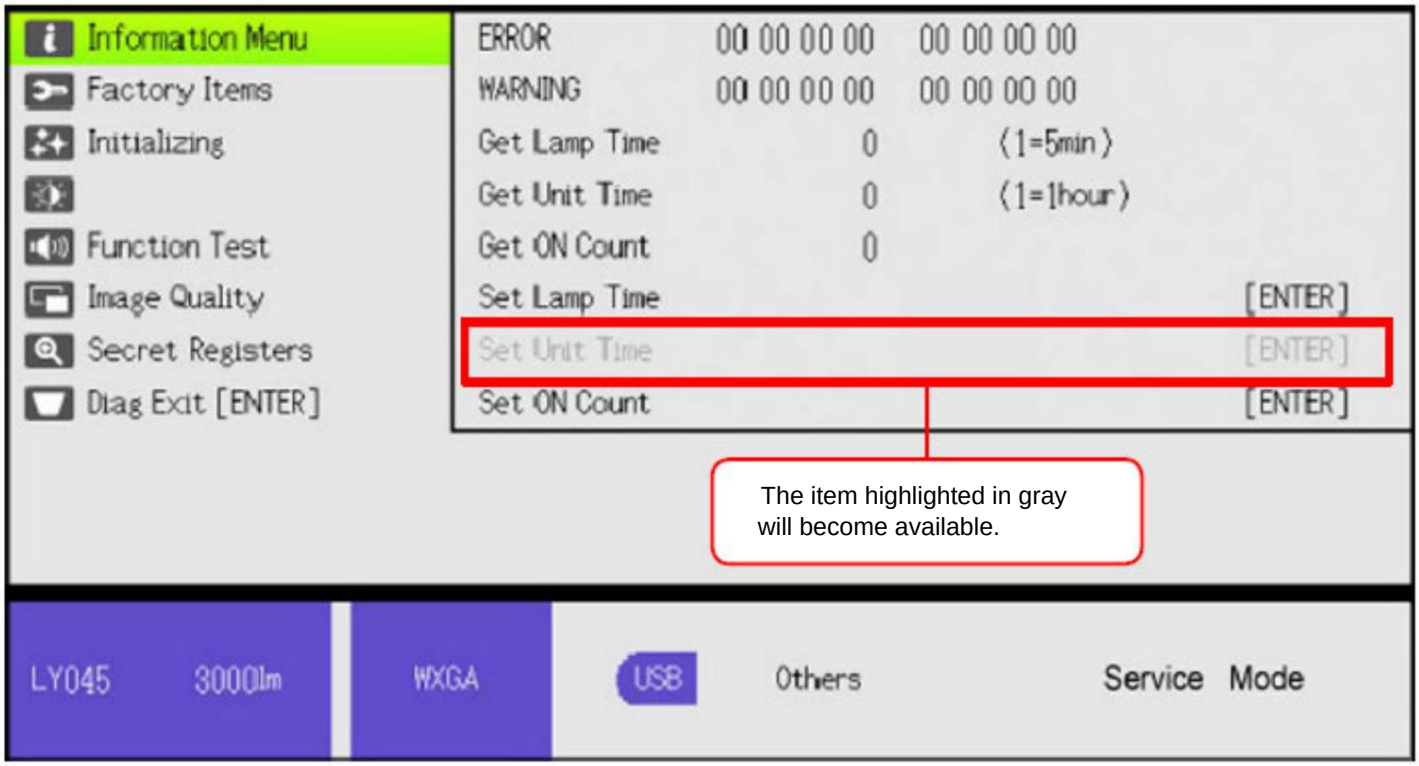
8-5. Setting device time

(1) Move the cursor to "Information Menu" in the main menu and press the [ENTER] button. (2) On the main unit, press the [AUTO], [INPUT],
[FOCUS] and [MENU] buttons at the same time. (This item cannot be performed using the remote control). (3) The gray text "Set Unit Time" will change color to black, its use

will become possible.

NOTE: after activating the "Set Unit Time" line, it will remain active until exiting the diagnostic program.



(4) Move the cursor to "Set Unit Time" and press the [ENTER] button to change the unit time.

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9. DATA BACKUP

The proposed application provides for the collection, storage and registration of internal information of the central processing unit in projectors manufactured by Casio Computer Co., Ltd. The collected information includes individual calibration data and error log entries.

NOTE: In order to use this software, the user must agree to the terms below. If the user does not agree to them and still uses the software, Casio accepts no responsibility for anything related to the software.

- This software is designed to evaluate Casio Computer products designed for commercial use and should not be used for any other purpose.
- Casio Computer is not responsible for any malfunction or defect arising from program usage time. The software is used by the user at his own risk.
- Reproduction and/or distribution is restricted to employees or partners of Casio Computer Ltd.

9-1. System requirements

Applicable model	CASIO XJ-A series projector (XJ-A130/A135/A140/A145/A230/A235/A240/A245) CASIO XJ-S series projector (XJ-S33/S38/S43/S48/S53/S58/S63/S68/ S43W) CASIO XJ-SC series projector (XJ-SC210/SC215)
Supported OS Media	Windows 2000/XP
Interface	Serial COM Ports *Supported on COM 1 - COM 15 Dedicated RS232
products, pluggable To interface	cable TY6571-010107 (B Type) (D-sub, 9 pins per side) *Cable can be ordered from Overseas Service Division. *Similar to cables used for firmware upgrades.

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9-2. Software Features

<Information Display Functions> You can download and view the following information from the projector: **Functions**

Product	Description
Information	Firmware version information for Main CPU/Sub CPU (Sub CPU)/IO USB (I/O USB) Checksum for firmware for Main CPU (Main CPU)/Sub CPU (Sub CPU) RGB/
Device Calibration Data	Component Calibration Data DLP Indexing Delay Setting Information Acceleration Sensor Calibration Data Total Lamp Hours Device
Device Usage Information	Hours Total Lamp Hours Count
Password information	
Settings for the intended market	Eco mode settings (Normal or Eco) Language selection A/D controller automatic gain calibration information
Special calibration data for video input signal	Sog level settings Fatal and non-fatal error log information Internal status information when errors occur
Error log information	

<File processing functions>
Displayed information can be processed as files. Save **functions**

	Description
	Lets you save information as a new file or use it to replace data in an existing file. Allows the user to open an existing file by
open	specifying the filename (extension: .klg). Allows the user to create a new file to collect information.
New (New)	Dedicated binary format (extension: .klg).
File Format	

<Compatibility> •
These backup files are not compatible with files (file extension: .xbk) created with XJ series backup software (XJ-350/450/560) (XjBackup.exe). • These backup files are not compatible with files (file extension: .bk7) created with the XJ series backup software (XJ-3S30/S35) (Backup797.exe).

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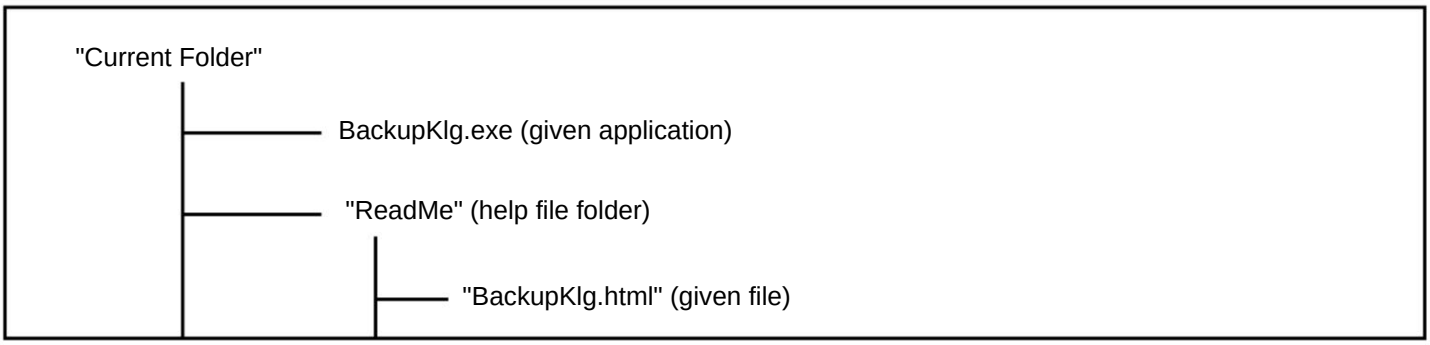
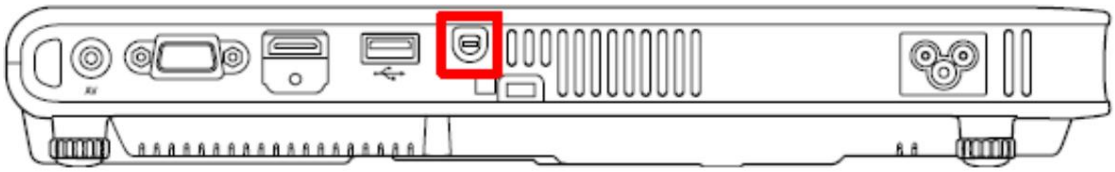
9-3. Installing the software Copy the file (BackupKlg.zip)
to an appropriate working folder and unzip it. This is all that needs to be done.

Directory structure of the unzipped program



9-4. Connecting the projector (1)
Connect a PC and a separate RS232 cable (TY6571-010107 (B Type): D-sub with 9 pins on one side). (2) Connect the projector and a separate RS232 cable (TY6571-010107 (B Type): D-sub with 9 pins on one side). (Indicated in red in the figure).



9-5. Starting the program and setup screen (1) Connect
the projector to the host computer as described in “9-4. Connecting a Projector". Do not connect the power cable until the host computer and projector are connected. (2) Connect the power cable to the projector, and wait until
the [POWER] LED lights up in yellow (Standby). (3) Press the projector buttons below to enable communication between the projector and the host
computer (backup mode). **NOTE:** Perform the following procedure while in standby mode. Executing it in a different mode may result in the inability
to enter the backup mode. **Keep the [ESC], [FOCUS] and [AUTO] buttons pressed.** Status of [POWER/LAMP/TEMP] LEDs on the projector: **[POWER]: Flashing green/ [LAMP/TEMP]:**
Off (4) In standby mode, run the “KlgBkup.exe” file from the host
computer.

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(5) Description of the menu
bar The menu bar located at the top of the screen is used to perform the following tasks.

Main menu	Submenu	Description
File (File)	New (New)	Create a new backup file (*.klg). Opening an
	open	existing backup file (*.klg). Saving a modified backup
	Save (Save as)	file (*.klg).
Page	General Information	Displays the product information page on the projector. Displays
	Error Log Information (Error log information)	the error information page of the projector. Displays the product
	Calibration Information	calibration data page in the projector. Displays the projector security information
	Protect Information	page. The information includes device usage data, settings for the intended market, and specific video input calibration data. Selecting a COM port, connecting or disconnecting from a port. Download data from projectors as a batch.
Communication	Connect COM Port	
	Get Information from Projector	
	Set Information to Projector	Upload data to the projector as a batch.
View	Tool Bar (Menu Bar)	Show or hide the toolbar. Show or hide the
	Status Bar	status bar. Displays the application details
Help	About BackupLY (ÿ BackupLY)	dialog box.

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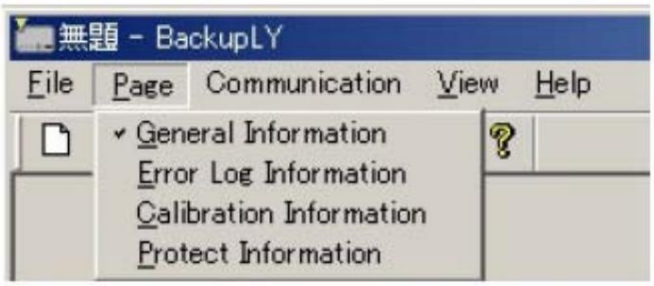
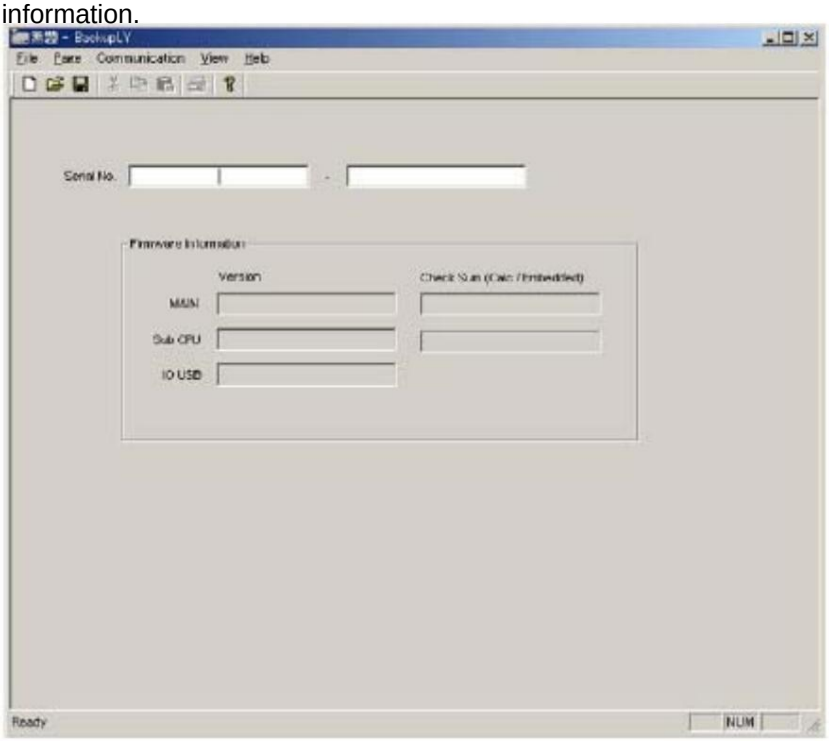
9-6. View Backup Data Select the page of
backup data you want to view. After clicking the “Page” item, a drop-down list will appear in the menu bar.



Click on the required line to open the page window displaying the data.

(1) General Information page This page displays product
information.



Group	Item	Description
File	Edit window “Serial Number" ("Serial number")	Enter the serial number of the product. (In this case: A030AAAA9C-010018) The entered serial number will be used as the default name under which the backup file will be saved. (The name can be changed by the user in the "Save File" dialog box. Displays the loaded firmware version for the main CPU
Group «Firmware Information"	"MAIN" window	(*.*.**) and checksum (ROM). The format is the same as that used for projector output .Displays the firmware version loaded for the main sub CPU (*.*.**) and checksum (ROM) The format is the
	Window CPU» "Sub" (Additional CPU)	same as that used when outputting information on the projector.Displays the loaded firmware version for the USB host I/O (*.*. **/*.*.**) The format is the same as that used for projector output.
	Window USB» "IO("IN/OUT USB")	

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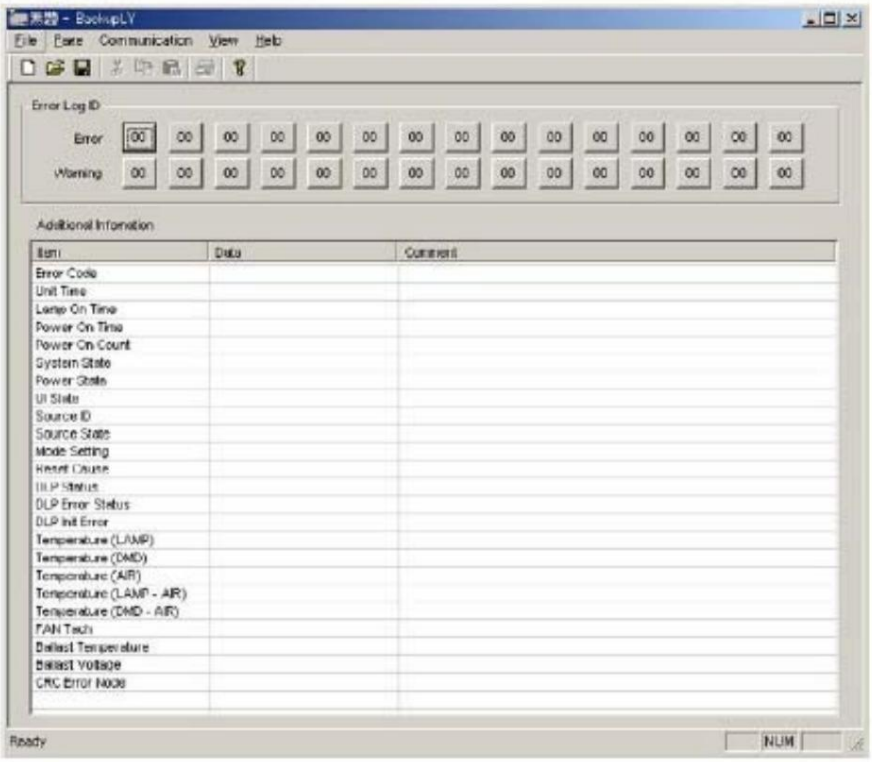
(2) "Error Log Information" page This page displays the error information of the device.



Group	Item
"Error Log ID" group List	Error ID Button
«Additional Information" ("Additional information")	Error Code item Unit Time item Lamp On Time item Power On Time item Power On Count System State Item Power State Item UI State Item Source ID Item (Source ID Item Source State Item Mode Setting Item Reset Cause Item DLP Status Item DLP Error Status Item Temperature Item FAN Tach Item Ballast Temperature Item Ballast Voltage Item (Ballast Voltage) Item "CRC Error Node"

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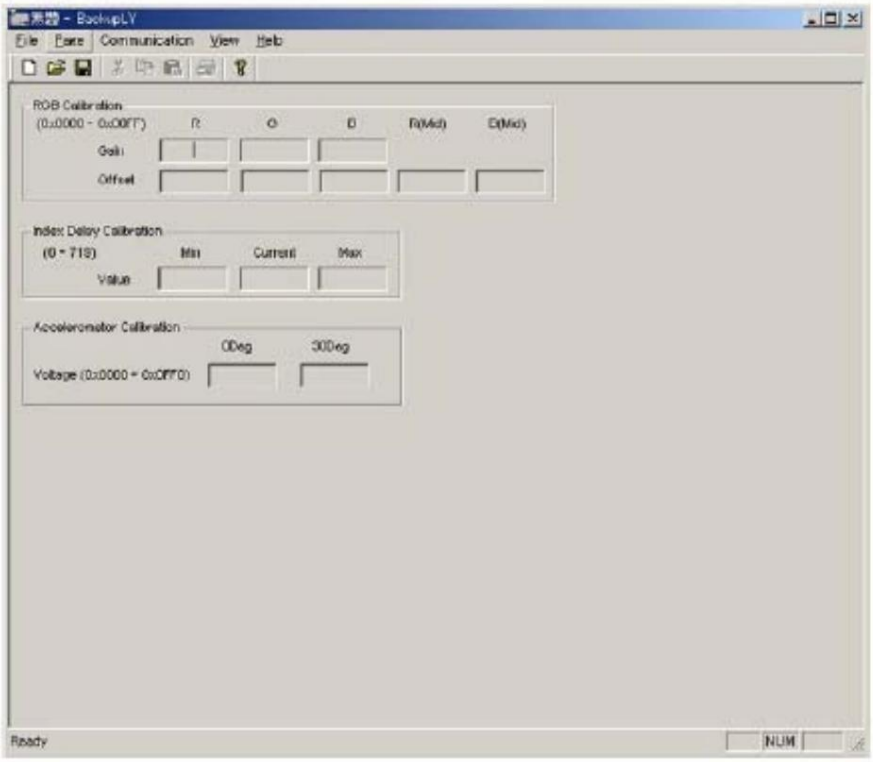
(3) "Calibration Information" page This page displays the calibration data for all devices.



Group	
RGB Calibration Group	Window **Item** "Gain" and "Offset"
«Index Delay Calibration Group	Value window
«Accelerometer Calibration" ("Calibration of the accelerometer")	"Voltage" window

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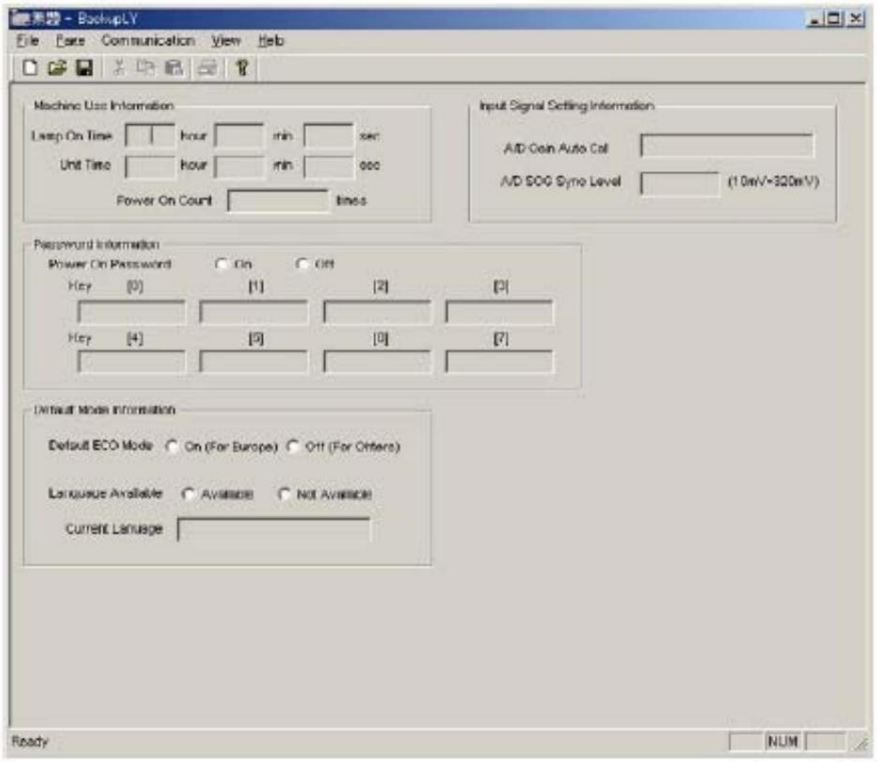
(4) Protect Information page This page displays the special information stored in the device.


File Para Communication View Help
Machine Use Information
Lamp On Time hour min sec
Unit Time hour min sec
Power On Count times
Input Signal Setting Information
A/D Gain Auto Cal
A/D SOG Sync Level (10mV~320mV)
Password Information
Power On Password On Off
Key [0] [1] [2] [3]
Key [4] [5] [6] [7]
Default Mode Information
Default ECO Mode On (For Europe) Off (For Others)
Language Available Available Not Available
Current Language
Ready
NUM

Group	Item
Group «Machine Use Information" Group	Lamp On Time window Unit Time window Power On
	Count window
«Password Information" Group	"On" and "Off" switches "Key" window
«Default Mode Information" ("Information about the default mode")	Default ECO Mode Switch Language Available Switch Current Language Window
	A/D Gain Auto Cal Window amplification of the analog-to-
	digital converter")
Group "Input Signal Setting Information"	
	SOG Separate Level Window

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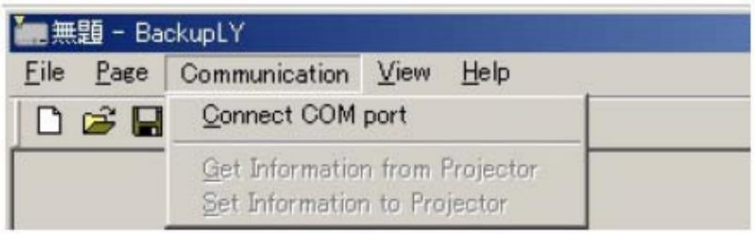
9-7. Uploading backup data

<Before uploading backup data, connect the COM port in use> (1) Select "Connect COM Port" from the "Communication" menu. The connection dialog box will open.

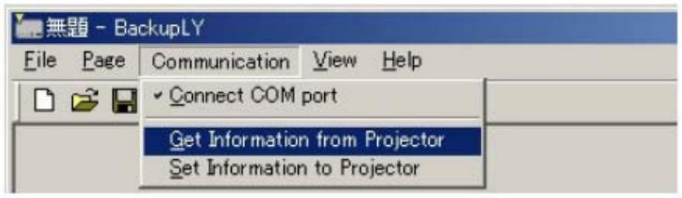


(2) Select the COM port you want to connect from the list and click the "Connect" button.

(3) After the connection is established, the dialog box will automatically close. When you reopen the dialog box, the list of COM ports and the "Connect" button will not be available, so the configuration change is impossible.

(4) To connect another COM port, click the "Disconnect" button. The list of COM ports and the "Connect" button will become active, and it will be possible to change the setting.

<To download backup data, follow the steps below> (1) You can download all the data at once by selecting "Get Information from Projector" in the "Communication" menu.



(2) After uploading data successfully, the following dialog box will appear, the uploaded data will be updated.

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<To upload backup data, follow the steps below> (1) You can upload all the data at once by selecting "Set Information to Projector" in the "Communication" menu.

(2) After successfully uploading the data, the following dialog box will appear.

<The table below lists possible connection error messages> Meaning Possible cause and remedy Error when • Make sure your

Message	PC supports COM	to open the COM port.
		port. • Make sure the selected COM port is not is being used by another application.
	Error waiting time connections.	• Make sure the connection between the PC and the projector is correct. Connect the projector and host computer as described in “9-4. Connecting a Projector". • Make sure that the vice-rector's status allows you to establish a connection with the PC. Turn on the projector as described in “9-5. Launching the program and installation screen. • Make sure your projector has a supported firmware version.
	Error response.	• Make sure the connection between the PC and the projector is correct. Connect the projector and host computer as described in “9-4. Connecting a Projector". • Make sure that the vice-rector's status allows you to establish a connection with the PC. Turn on the projector as described in “9-5. Launching the program and installation screen. If one of the above messages appears, try downloading/uploading the data again.

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9-8. Saving and loading backup data Downloaded backup
data can be saved as a file. Saved files can later be opened. Use the [New] (New), [Open] (Open), [Save] (Save) and [Save As] (Save as) items in the [File] menu (File"). The file has the extension "*.klg".

9-9. Notes on using the projector (1) Successful operation of
the software on unsupported equipment is not guaranteed. (2) When uploading backup data to the projector,
make sure that the uploaded data does not contain errors. (3) The operation of the projector is not guaranteed if it is restarted after uploading invalid data.

9-10. Update Information To view the
application version information dialog box, select "About BackupLY" from the "Help" menu.

Version	Comment
1.02.01	February 2010

Machine Translated by Google

10. ADJUSTMENT

When replacing the main PCB (PWB-1 BOARD) or the OPM, perform the indexing delay setting.

10.1 Startup procedure (1)
Connect the power cable to the projector and wait for the [POWER] LED to turn yellow. (2) Press the [(POWER] button on the
remote control or on the projector to turn on
his.
(3) Follow the steps below to run the diagnostic program.

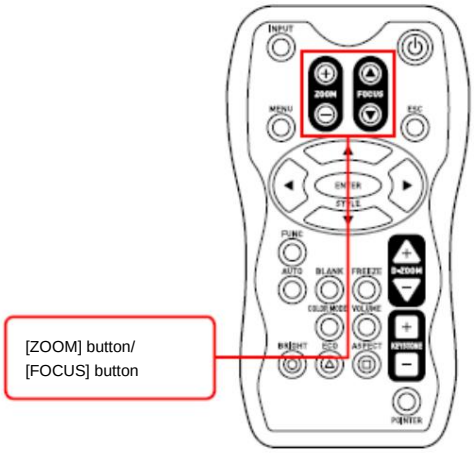
Step 1. Press the [ENTER] and [ ] buttons simultaneously.
Step 2 After pressing the buttons as described in step 1, press and hold the [INPUT] button for 2 seconds. (a total of 3 buttons must be held down).
Step 3 Release all buttons except the [INPUT] button.

(4) The diagnostic program menu will appear.

10-2. Procedure •

Use the cursor buttons to select the item to be diagnosed, then press the [ENTER] button. to confirm the selection, and run diagnostics. • To return to the previous menu level, press the [ESC] button. • To exit the diagnostic program, move the cursor to "Diag Exit [ENTER]" and press the button [ENTER].

NOTE: While the diagnostic program is running, the [ZOOM] and [FOCUS] buttons on the main unit are inactive. To change the image size or focus, use the [ZOOM] and [FOCUS] buttons on the remote control, which remain active.



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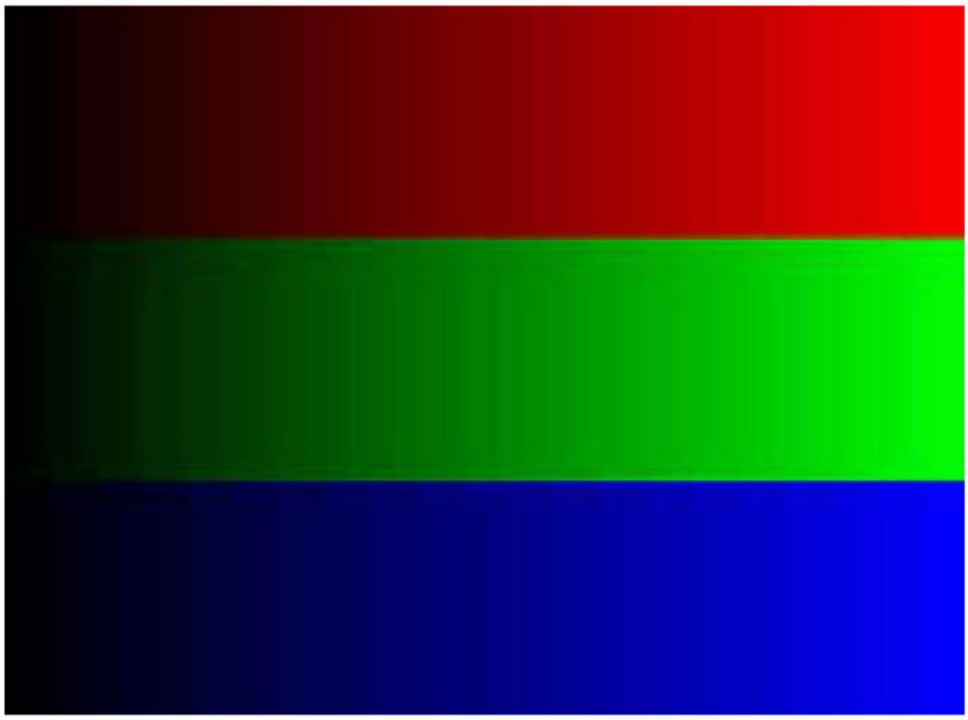
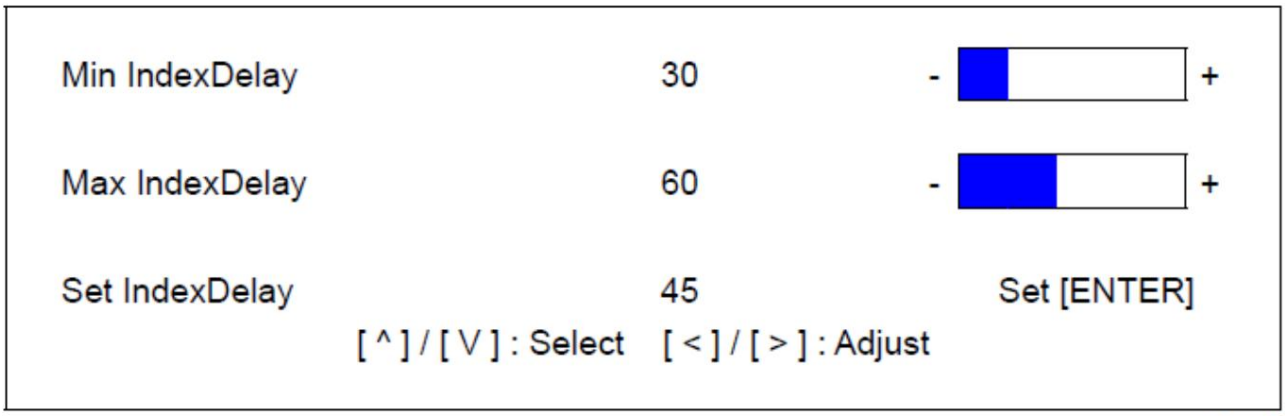
10-3. Indexing Delay Setting

(1) From the main menu, select "Factory Items" ÿ "Index Delay" indexing"). (2)

A 64-gradation RGB pattern and slider will be projected on the screen.



<Index Delay Control>



(3) Highlight "Min Index Delay" and use the [ ] and [ ] change the indexing delay setting. Select the minimum indexing delay setting at which the gradation image will begin to degrade. (4) Use the [ ] and [ ] buttons to highlight "Max Index Delay" and use the [ ] and [ ] buttons to change the index delay setting. Select the maximum indexing delay setting at which the gradation image will begin to degrade. (5) Highlight "Set Index Delay" and press the [ENTER] button. The average value between the maximum and minimum indexing delay will be recorded as the indexing delay value.

(6) Press the [ESC] button to return to the menu screen.

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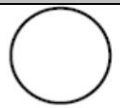
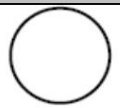
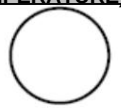
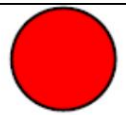
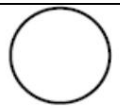
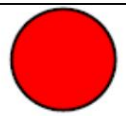
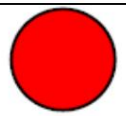
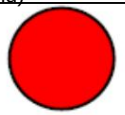
11. TROUBLESHOOTING

11-1. Error processing

LIGHT-EMITTING DIODE			Description	Code Page	
POWER	LAMP	TEMP (TEMPERATURE)			
 Does not burn	 Does not burn	 Does not burn	LED does not turn on		65
permanent yellow	permanent yellow	permanent yellow	The device does not enter standby mode		65
			Button does not work		65
 permanent red	 Does not burn	Flashing yellow (interval 1 second)	Faulty LSA cover	18	66
 Permanent red	 Permanent red	 Permanent red	Fan stop	20 21 22 23	66
			The fan does not turn on	25 26 27 28	66

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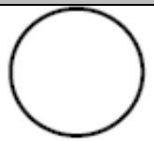
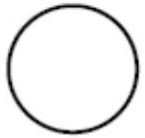
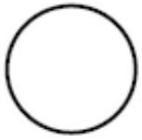
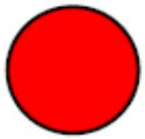
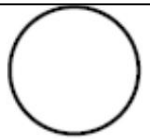
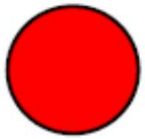
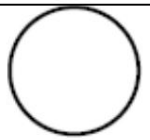
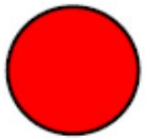
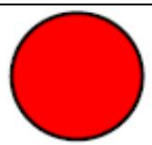
LIGHT-EMITTING DIODE			Description	Code	Page
POWER	LAMP	TEMP (TEMPERATURE)			
Flashing yellow (interval 1 second) permanent yellow	 Does not burn  Does not burn	Flashing red (interval 1 second)  Does not burn	Heat	10 11 12 13 14 15	67
 permanent red	 Does not burn	Flashing red (0.5 second interval)	Thermostat failure (LSA)	86	67
 permanent red	 Does not burn	Flashing red (interval 2 seconds)	EEPROM CRC error	78	68
			EEPROM connection error	7C	
 Solid red Flashing red (interval 2 seconds)		Flashing red (interval 2 seconds)	Communication error between DDP2431 and SUB CPU	V0	68
 Solid red Flashing red	(0.5 second interval)	Flashing red (interval 2 seconds)	Abnormal operation of the SUB CPU system	V1	68

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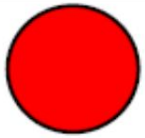
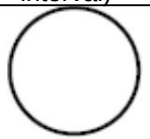
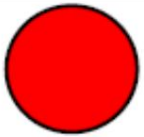
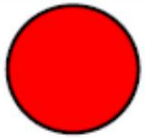
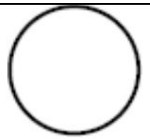
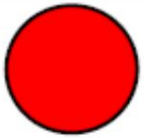
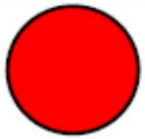
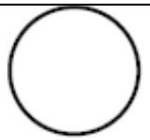
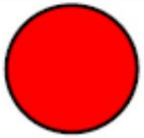
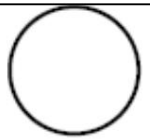
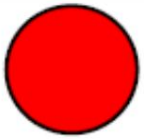
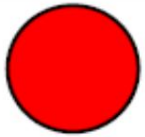
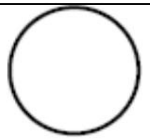
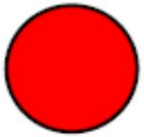
LIGHT-EMITTING DIODE			Description	Code	Page
POWER	LAMP	TEMP (TEMPERATURE)			
Solid red	(0.5 second interval)	Flashing red (0.5 second interval)	LD CPU connection error LD	40	69
			CPU EEPROM connection error	47	
			Lamp On Error	81	
			Lamp off error	80	
 permanent red	 Does not burn	 permanent red	Low Voltage LD	D0	69
			High voltage LD	D1	
			Overcurrent LD	D2	
 permanent red	 Does not burn	 permanent red	Low voltage LED	E0	70
			High voltage LED	E1	
			Overcurrent LED	E2	
 permanent red	 Does not burn	 permanent red	High Voltage Peltier Cell (LSB)	F1	70
			Peltier overcurrent (LSB)	F2	
permanent red	 Does not burn	 permanent red	FW stop error	C0	71
				C1	
			Fan turn on error	C2	
 permanent red	 Does not burn	 permanent red	Low voltage DAD2000	A0	71
				A1	
			Temperature error DAD2000	A2	
				A3	
			Overcurrent DAD2000	A4	
				A5	
			Over current and temperature error PMD1000	A6	
				A7	
			System error DDP2431	AE	

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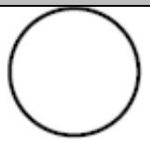
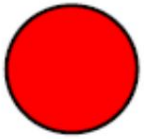
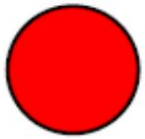
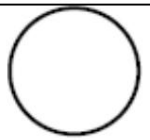
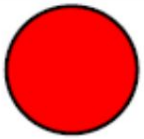
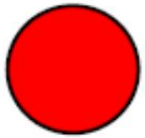
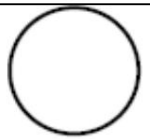
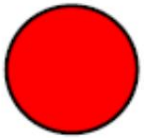
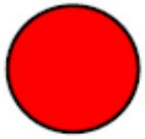
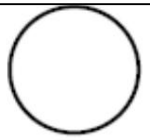
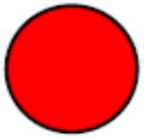
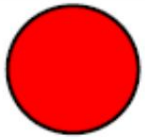
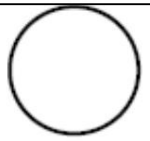
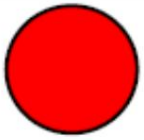
LIGHT-EMITTING DIODE			Description	Code	Page
POWER	LAMP	TEMP (TEMPERATURE)			
permanent red	 Does not burn	 permanent red	ORM connection error	74	72
 permanent red	 Does not burn	 permanent red	ORM error	50 51	72
 permanent red	 Does not burn	 permanent red	Thermistor disconnected	30 31 32 33 34 35	72
 permanent red	 Does not burn	 permanent red	Device connection error	70 71 72 75 76 77	73
 permanent red	 Does not burn	 permanent red	I/O block connection error	73	73

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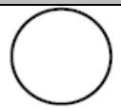
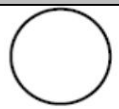
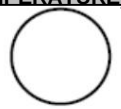
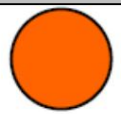
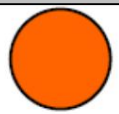
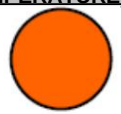
LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 Does not burn	 Does not burn	 Does not burn	LED does not light up		-	(1) KEY-FPC connector is disconnected. (2) Disconnected or pinched cable between PWB-1 board and ACDC module. (3) Pinched cable between PWB-1 board and LSA cover switch. (4) Pinched cable between PWB-1 board and PWB-5 board. (5) Faulty power supply. (6) The PWB-1 board is defective (in the area of SUB CPU or CN907).

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent yellow	 permanent yellow	 permanent yellow	The device does not enter standby mode			(1) Missing or damaged board-to-board (BtoB) connector. (2) No contact between PWB-1 board and PWB-3 board (FFC cable connected at an angle). (3) PWB-1 board is defective.

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
			Button does not work			(1) Broken KEY-FPC wire. (2) The PWB-1 board is defective (in the area of SUB CPU or CN907).

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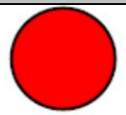
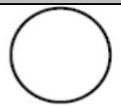
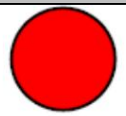
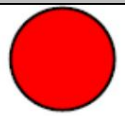
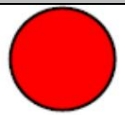
LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	Flashing yellow (interval 1 second)	Faulty LSA cover	-	18	(1) Cable disconnected or pinched between PWB-1 board and LSA cover. (2) The LSA cover is not closed or is screwed on loosely. (3) The LSA cover switch is defective or not set correctly. (4) The PWB-1 board is defective (in the area of CN901).

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 permanent red	 permanent red	Stop fan	FAN1	20	(1) Fan cable disconnected or pinched. (2) The fan is defective or installed incorrectly. (3) Faulty PWB-3 board (connectors).
				FAN2		
				FAN3		
				FAN4		
			The fan does not turn on	FAN1	21 22 23 25	(1) Fan cable 26 is disconnected, pinched or broken. (2) The fan is defective or incorrectly installed 27. (3) Faulty PWB-3 board (connectors, parts not installed).
				FAN2		
				FAN3		
				FAN4	28	

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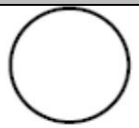
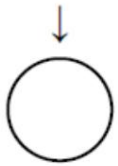
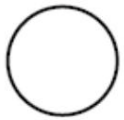
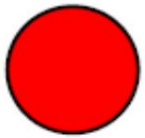
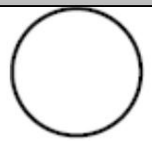
LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
Flashing yellow (interval 1 second) permanent yellow	 Does not burn  Does not burn	Flashing red (interval 1 second)  Does not burn	High temperature	AIR	10	(1) High temperature parts. (2) Parts of the cooling system (fan, etc.) are installed incorrectly. (3) The insulating plate under the PWB-7 board is not properly installed.
				DMD	11	
				LD1	12	
				LD2	13	
				LDDRV	14	
				LED	15	

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	Flashing red (0.5 second interval)	Thermostat failure (LSA)	LD	86	(1) The bottom of the FPC thermostat cable is squashed. (2) Broken or pinched thermostat cable. (3) The temperature of the parts is too high. (4) Parts of the cooling system (fan, etc.) are installed incorrectly. (5) LSA module FPC cable disconnected. (6) Cable disconnected or pinched between PWB-1 board and PWB-7 board. (7) The PWB-1 board is defective (in the area of CN905). (8) Faulty PWB-7 board (in the area of CN101).

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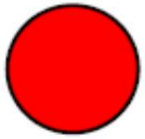
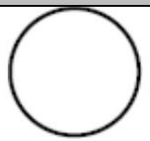
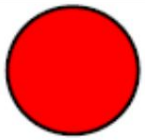
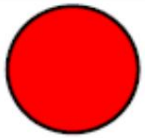
LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	Flashing red (interval 2 seconds)	eeprom error CRC		7C	Faulty pay PWB-1.
			Error connections EEPROM	-	7C	

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	Flashing red (interval 2 seconds)	Flashing red (interval 2 seconds)	Error connections between DDP2431 and SUB CPU			(1) PWB-1 board is defective. (2) Disconnected or pinched cable between PWB-1 board and ACDC module. (3) The temperature is above the upper limit of the ACDC module. (4) Faulty power supply.
				-	V0	Faulty pay PWB-1.

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	Flashing red (0.5 second interval)	Flashing red (interval 2 seconds)	Abnormal system operation SUB CPU		V1	Faulty pay PWB-1.

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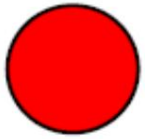
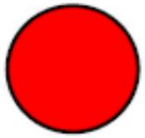
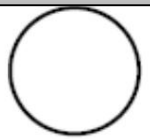
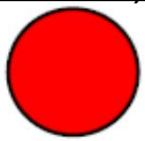
LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	Flashing red (0.5 second interval)	Flashing red (0.5 second interval)	LD connection error CPU			(1) Cable disconnected or pinched between PWB-1 board and PWB-7 board. (2) The PWB-1 board is defective (in the area of CN905). (3) The PWB-7 board is defective (in the area of CN101).
			LD connection error CPU EEPROM			Faulty pay PWB-7.
			Error Lamp ON Error			1) Cable disconnected or pinched between PWB-1 board and PWB-7 board. (2) Faulty PWB-7 board (in the area of CN101).
			shutdown lamps	-		

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	 permanent red	Low Voltage LD		D0	(1) LSA module connector missing (short circuit). (2) Faulty LSA module (solder joint short circuit, etc.). (3) The PWB-7 board is defective (in the area of CN301 or LD_Driver). (1) LSA module connector missing (not soldered). (2) Faulty LSA module (not soldered).
			High voltage LD		D1	(3) The PWB-7 board is defective (in the area of CN301 or LD_Driver).
			Excess current LD		D2	Defective PWB-7 board (in LD_Driver areas).

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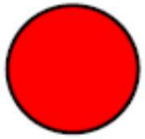
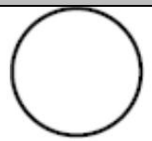
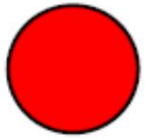
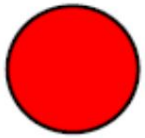
LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	 permanent red	Low voltage LED		E0	(1) LSB module connector missing (short circuit). (2) The LSB module is defective (short circuit of the solder joint, etc.). (3) Faulty PWB-7 board (in CN402 or LED_Driver area). (1) LSB module connector missing (not soldered). (2) Faulty LSB module (not soldered). (3)
			High voltage LED		E1	Faulty PWB-7 board (in CN402 or LED_Driver area). (1) Faulty PWB-7 board (in LED_Driver area). (2) LSB module cable pinched.
			Excess current LÿD	-	E2	

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	Flashing red (0.5 second interval)	Flashing red (interval 2 seconds)	High Peltier element voltage (LSB)		F1	(1) No contact in Peltier element connector (break). (2) Peltier element defective (not soldered). (3) Faulty PWB-7 board (in CN501 or Peltier_Driver area). (4) Pinched cable.
			Peltier element overcurrent (LSB)		F2	(1) Defective PWB-7 board (in Peltier_Driver areas).

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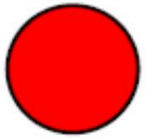
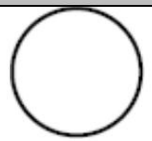
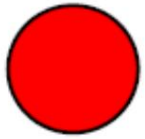
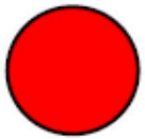
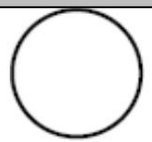
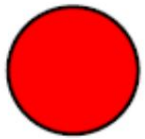
LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	 permanent red	Stop error FW	DDP C0 detected SUB C1 detected		(1) The FPC cable of the FW module is disconnected or pinched. (2) The FW module is installed incorrectly (influenced by other parts). (3) FW module defective (not soldered). (4) The PWB-1 board is defective (in the area of CN801).
			Error inclusion fan		C2	

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	 permanent red	Low voltage DAD2000	During projection Power	A0	(1) PWB-2 board is defective. (2) The PWB-2 board is installed incorrectly (short circuit to metal parts).
				included	A1	
			Error temperature DAD2000	During projection Power	A2	
				included	A3	
			Excess current DAD2000	During projection Power	A4	
				included	A5	
			Over current and error temperature PMD1000	During projection Power	A6	Faulty pay PWB-1.
				included	A7	
			System error DDP2431		AE	(1) Broken or damaged board-to-board (BtoB) connector. (2) PWB-2 board is defective. (3) PWB-1 board is defective.

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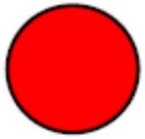
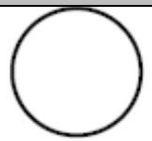
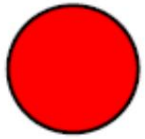
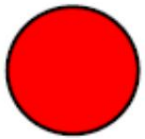
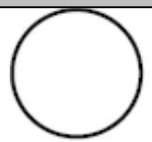
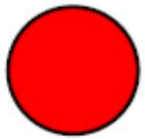
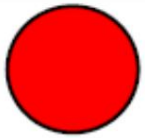
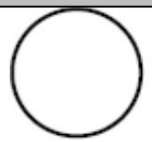
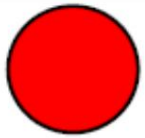
LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	 permanent red	ORM connection error		74	(1) Disconnection or breakage of the FFC cable for the OPM. (2) Faulty ORM module (wrong soldering, etc.). (3) The PWB-1 board is defective (in the area of CN401).

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	 permanent red	ORM error	ORM is working fine	50	(1) Mechanical damage to the ORM module. (2) Faulty ORM module (wrong soldering, etc.).
				When you enable ORM	51	

LIGHT-EMITTING DIODE			Description	Classification Code		Possible reasons
POWER	LAMP	TEMP (TEMPERATURE)				
 permanent red	 Does not burn	 permanent red	Thermistor disconnected	AIR	30	Defective board PWB-1 (in CN401 area).
				DMD	31	(1) Broken or damaged board-to-board (BtoB) connector. (2) Faulty PWB-1 board (in BtoB connector area). (1) Loose contact in LSA module connector, or incorrect soldering of LSA module, or broken FPC cable. (2) The PWB-7 board is defective (in the area of CN301). 34 Faulty PWB-7 board. (1) Loose contact in LSB module connector or wrong soldering of LSB module. (2) Faulty PWB-7 board (in the area of CN402).
				LD1	32	
				LD2	33	
				LDDRV		
				LED	35	

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CASIO COMPUTER CO.,LTD.
Overseas Service Division

6-2, Hon-machi 1-Chome
Shibuya-ku, Tokyo 151-8543, Japan